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1974

1973

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Water Resources Data for Arizona

Water Year 1973

Part 2. Water Quality Records

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UNITED STATES
DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT AZ-73-2

Prepared in cooperation with the State of Arizona
and with other agencies

188

CALENDAR FOR WATER YEAR 1973

1972

OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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31						

1973

JANUARY

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JUNE

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JULY

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AUGUST

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SEPTEMBER

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9	10	11	12	13	14	15
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Water resources data for the 1973 water year for Arizona consist of records of discharge and water quality of streams, and water quality of lakes and reservoirs. This report contains water quality for 48 gaging stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating local, State, and Federal agencies in Arizona.

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Water Resources Data for Arizona

Water Year 1973

Part 2. Water Quality Records

UNITED STATES
DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT AZ-73-2

Prepared in cooperation with the State of Arizona
and with other agencies

Prepared in cooperation with

Bureau of Reclamation, U. S. Department of the Interior
Environmental Protection Agency, U. S. Department of the Interior
Soil Conservation Service, U. S. Department of Agriculture
Arizona Water Commission
Metropolitan Water District of Southern California

Water resources records, 1973 for Arizona are in the following reports of the U. S. Geological Survey:

1. Water Resources Data for Arizona
   Part 1. Surface Water Records
2. Water Resources Data for Arizona
   Part 2. Water Quality Records

Copies of this report may be obtained from
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U. S. Geological Survey
301 W. Congress Street
Tucson, Arizona 85701

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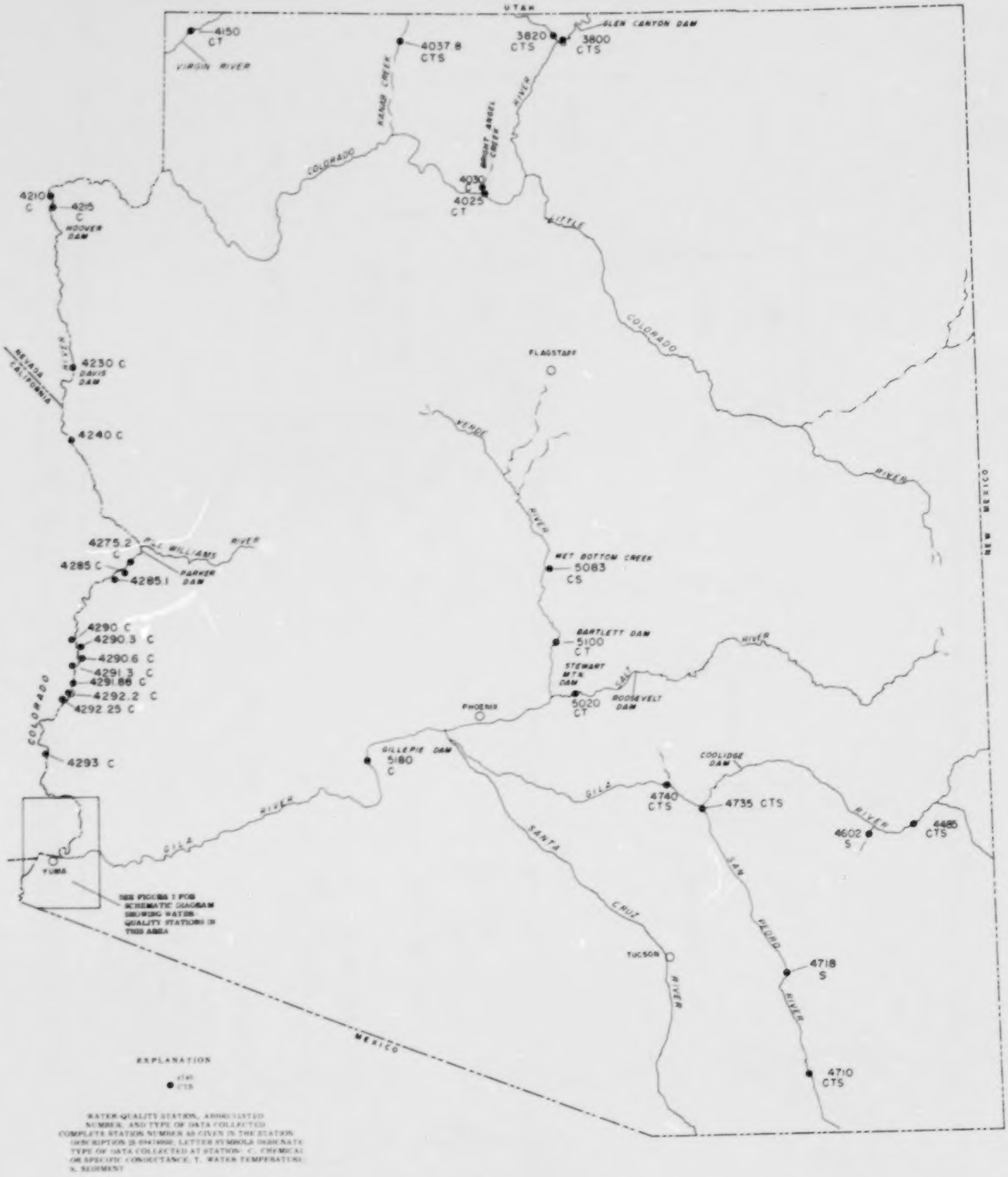
UTAH
4150 CT
VIRGIN RIVER
4037.8 CTS
KANAB CREEK
3820 CTS
3800 CTS
GLEN CANYON DAM
BRIGHT ANGEL CREEK
RIVER
COLORADO
4030 C
4025 CT
LITTLE
COLORADO
RIVER
4210 C
4215 C
HOOVER DAM
NEVADA
CALIFORNIA
RIVER
4230 C
DAVIS DAM
4240 C
FLAGSTAFF
VERDE
RIVER
NEW MEXICO
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WET BOTTOM CREEK
5083 CS
4290 C
4290.3 C
4290.6 C
4291.3 C
4291.88 C
4292.2 C
4292.25 C
BARTLETT DAM
5100 CT
RIVER
STEWART MTN DAM
SALT
5020 CT
ROOSEVELT DAM
PHOENIX
COLORADO
4293 C
GILLESPIE DAM
5180 C
COOLIDGE DAM
GILA
4740 CTS
4735 CTS
RIVER
4602 S
4485 CTS
GILA
RIVER
YUMA
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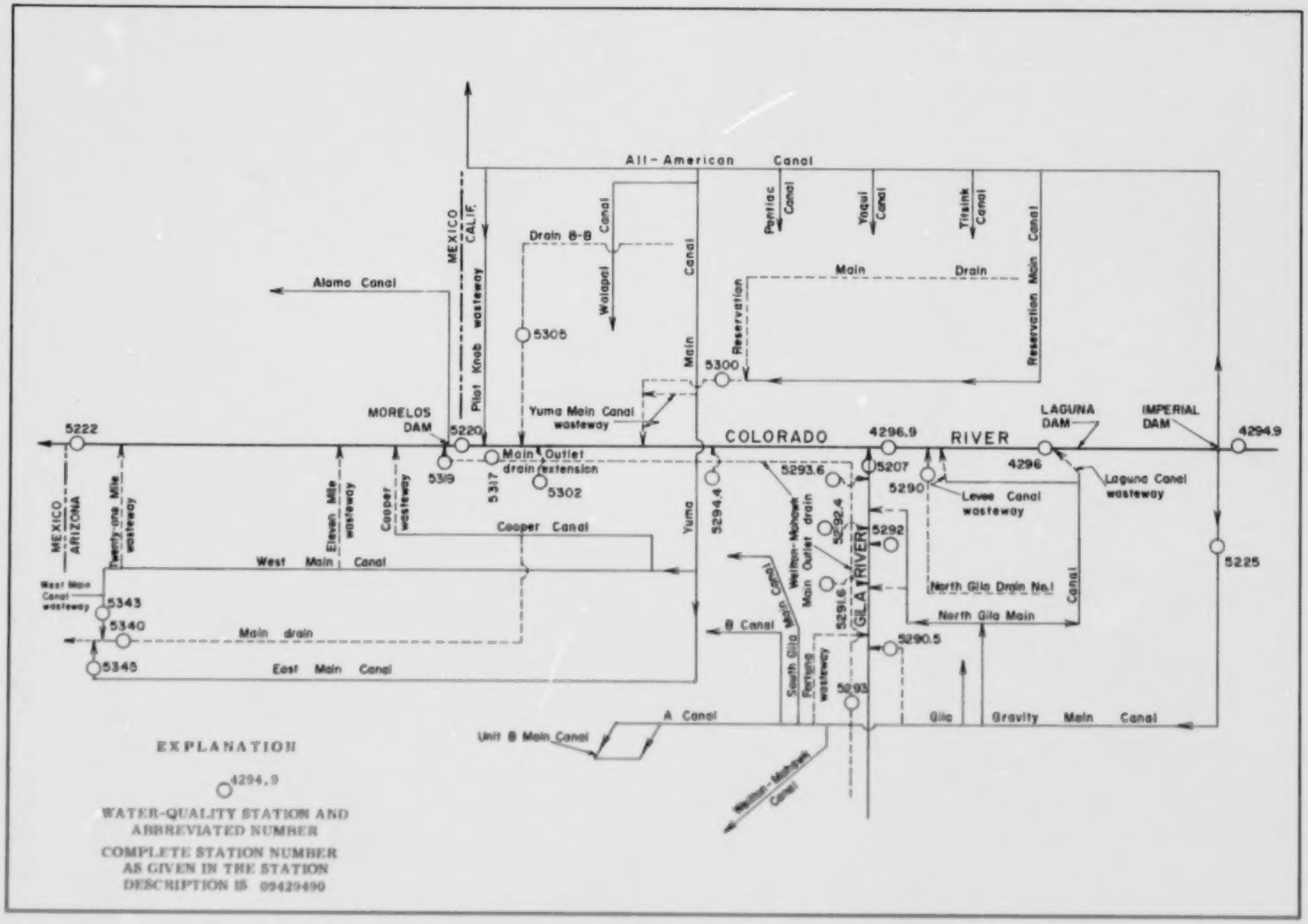
SANTA
CRUZ
SAN
PEDRO
TUCSON
RIVER
4718 S
RIVER
MEXICO
4710 CTS
EXPLANATION
4740 CTS
WATER-QUALITY STATION, ABBREVIATED NUMBER, AND TYPE OF DATA COLLECTED. COMPLETE STATION NUMBER AS GIVEN IN THE STATION DESCRIPTION IS 09474000. LETTER SYMBOLS DESIGNATE TYPE OF DATA COLLECTED AT STATION: C, CHEMICAL OR SPECIFIC CONDUCTANCE; T, WATER TEMPERATURE; S, SEDIMENT

FIGURE 1.--MAP OF ARIZONA SHOWING LOCATIONS OF WATER-QUALITY STATIONS, 1973 WATER YEAR.


4294.9
IMPERIAL DAM
5225
LAGUNA DAM
4296
Laguna Canal wasteway
Levee Canal wasteway
5290
4296.9
RIVER
COLORADO
5207
North Gila Drain No.1
Canal
North Gila Main
5290.5
Gila Gravity Main Canal
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5292
5292.4
5293.6
5291.6
5293
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South Gila Main Canal
Fortuna wasteway
Wellton-Mohawk Canal
B Canal
A Canal
Unit B Main Canal
5294.4
Yuma
All-American Canal
Pontiac Canal
Yaqui Canal
Titsink Canal
Reservation Main Canal
Main Drain
Reservation
Main Canal
5300
Yuma Main Canal wasteway
Walapai Canal
Drain 8-B
5305
Pilot Knob wasteway
MEXICO
CALIF.
Alamo Canal
MORELOS DAM
5220
5319
5317
Main Outlet drain extension
5302
Cooper Canal
Cooper wasteway
Eleven Mile wasteway
West Main Canal
Twenty-one Mile wasteway
5222
MEXICO
ARIZONA
West Main Canal wasteway
5343
5340
Main drain
5345
East Main Canal
EXPLANATION
4294.9
WATER-QUALITY STATION AND ABBREVIATED NUMBER
COMPLETE STATION NUMBER AS GIVEN IN THE STATION DESCRIPTION IS 09429490

FIGURE 2.--SCHEMATIC DIAGRAM SHOWING WATER-QUALITY STATIONS ON STREAMS, DIVERSIONS, AND RETURN FLOWS BETWEEN IMPERIAL DAM AND THE SOUTHERLY INTERNATIONAL BOUNDARY, 1973 WATER YEAR.

WATER RESOURCES DATA FOR ARIZONA, 1973

PART 2. WATER QUALITY RECORDS

INTRODUCTION

Water resources data for the 1973 water year for Arizona include records of data for the chemical and physical characteristics of surface water. Data on the quality of surface water (chemical, temperature, and sediment) were collected from designated sampling sites at predetermined intervals, such as once daily, weekly, monthly, or less frequently; at some sites, data were collected continuously by means of automatic recording devices. Records are given for 81 sampling stations, of which 48 are continuous record stations, 6 are partial-record stations, and 27 are miscellaneous sampling stations. Locations of surface water-quality stations are shown in figures 1 and 2. A few pertinent stations in bordering States are also included. The records were collected by the Water Resources Division of the U. S. Geological Survey under the direction of H. M. Babcock, district chief. These data represent that portion of the National Water Data System collected by the U. S. Geological Survey and cooperating State and Federal agencies in Arizona.

The Geological Survey has published records of chemical quality, water temperatures, and sediment since 1941 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Beginning with the 1964 water year, water-quality records have been released by the Geological Survey in annual reports on a State boundary basis. These reports are for limited distribution and are designed primarily for rapid release of data shortly after the end of the water year. These records will be published later in Geological Survey water-supply papers.

COOPERATION

Assistance in the form of funds or services was given by the Bureau of Reclamation, Environmental Protection Agency, U. S. Department of the Interior; Soil Conservation Service, U. S. Department of

Agriculture; International Boundary and Water Commission, Department of State; Arizona Water Commission; Salt River Valley Water Users' Association; and Metropolitan Water District of Southern California. Several stations were operated from funds appropriated directly to the Geological Survey.

Water-quality data from Lake Mead at Hoover Dam were furnished by the Metropolitan Water District of Southern California.

DEFINITION OF TERMS

Terms related to water-quality and hydrologic data, as used in this report are defined below. Also see table 5, "Factors for conversion of English units to International System (SI) Units."

Acre-foot (ac-ft, AC-FT) is a quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons.

Bed material is the shifting portion of fragmented alluvial material of which the streambed is composed.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

Coliform organisms are a group of bacteria used as an indicator of the sanitary quality of the water. The number of coliform colonies per 100 millilitres is determined by the immediate incubation membrane filter method.

Cubic foot per second (cfs, CFS) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

Discharge is the volume of water (or more broadly, total fluids) that passes a given point within a given period of time.

Mean discharge is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Drainage area of a stream at a specified location is that area, measured in horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Micrograms per litre ($\mu g/l$, UG/L) is a unit expressing the concentration of chemical constituents in solution as weight (micrograms) of solute per unit volume (litre) of water. One thousand micrograms per litre is equivalent to one milligram per litre.

Milligrams per litre (mg/l, MG/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per litre represents the weight of solute per unit volume of water. Milligrams or micrograms per litre may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per litre by multiplying by the factors in table 1. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per litre of water-sediment mixture. Sediment concentrations may be converted to parts per million by using the factors in table 2.

Miscellaneous site is a location other than continuous- or partial-record stations where random samples are collected to give better areal coverage of water-quality conditions in a river basin.

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per litre to milliequivalents per litre

Ion	Multiply by	Ion	Multiply by
Aluminum (Al^{+3})*	0.11119	Iodide (I^{-1})	0.00788
Ammonia as NH_4^{+1} . . .	.05544	Iron (Fe^{+3})*	.05372
Barium (Ba^{+2})	.01456	Lead (Pb^{+2})	.00965
Bicarbonate (HCO_3^{-1}) .	.01639	Lithium (Li^{+1})*	.14411
Bromide (Br^{-1})	.01251	Magnesium (Mg^{+2}) . . .	.08226
Calcium (Ca^{+2})	.04990	Manganese (Mn^{+2})* . .	.03640
Carbonate (CO_3^{-2}) . . .	.03333	Nickel (Ni^{+2})*	.03406
Chloride (Cl^{-1})	.02821	Nitrate (NO_3^{-1})	.01613
Chromium (Cr^{+6})* . . .	.11539	Nitrite (NO_2^{-1})	.02174
Cobalt (Co^{+2})*	.03394	Phosphate (PO_4^{-3}) . . .	.03159
Copper (Cu^{+2})*	.03148	Potassium (K^{+1})	.02557
Cyanide (CN^{-1})	.03844	Sodium (Na^{+1})	.04350
Fluoride (F^{-1})	.05264	Strontium (Sr^{+2})*	.02283
Hydrogen (H^{+1})	.99209	Sulfate (SO_4^{-2})	.02082
Hydroxide (OH^{-1})	.05880	Zinc (Zn^{+2})*	.03060

*Constituent reported in micrograms per litre; multiply by factor and divide results by 1,000.

Table 2. --Factors for conversion of sediment concentration in milligrams per litre to parts per million*

(All values calculated to three significant figures)

Range of concentration in 1,000 mg/l	Divide by	Range of concentration in 1,000 mg/l	Divide by
0 - 8	1.00	411 - 424	1.26
8.05 - 24	1.01	427 - 440	1.27
24.2 - 40	1.02	443 - 457	1.28
40.5 - 56	1.03	460 - 473	1.29
56.5 - 72	1.04	476 - 489	1.30
72.5 - 88	1.05	492 - 506	1.31
88.5 - 104	1.06	508 - 522	1.32
105 - 120	1.07	524 - 538	1.33
121 - 136	1.08	540 - 554	1.34
137 - 152	1.09	556 - 570	1.35
153 - 169	1.10	572 - 585	1.36
170 - 185	1.11	587 - 602	1.37
186 - 200	1.12	604 - 617	1.38
201 - 217	1.13	619 - 634	1.39
218 - 232	1.14	636 - 650	1.40
234 - 248	1.15	652 - 666	1.41
250 - 264	1.16	668 - 682	1.42
266 - 280	1.17	684 - 698	1.43
282 - 297	1.18	700 - 715	1.44
299 - 313	1.19	717 - 730	1.45
315 - 329	1.20	732 - 747	1.46
331 - 345	1.21	749 - 762	1.47
347 - 361	1.22	765 - 780	1.48
363 - 378	1.23	782 - 796	1.49
380 - 393	1.24	798 - 810	1.50
395 - 409	1.25		

*Based on water density of 1.000 g/ml and a specific gravity of sediment of 2.65.

Partial-record station is a particular site where limited streamflow or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimetres (mm), of suspended sediment or bed material determined either by sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling). (See Guy, 1969.)

Particle-size classification, used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	.004 - .062	Sedimentation
Sand	.062 - 2.0	Sedimentation or sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis (Guy, 1969).

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. It is computed by multiplying discharge times milligrams per litre times 0.0027.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per litre of water-sediment mixture (mg/l).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour period.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reaction with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating farmland.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimetre at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per litre) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may even vary in the same source with changes in the composition of the water.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Streptococcus organisms are a group of bacteria used as an indicator of the sanitary quality of the water. The number of streptococcus colonies per 100 millilitres is determined by the immediate incubation membrane filter method.

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the location of the thermograph or a digital mechanism that automatically records water temperature on paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per litre by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir. Also see table 5, "Factors for conversion of English units to International System (SI) Units."

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

Irrigation network stations are water-quality stations located at or near certain streamflow gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to the water year 1966, the data for these stations were published in the annual water-supply paper series, "Quality of Surface Waters for Irrigation, Western States."

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in stream water used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Pesticides are chemical compounds used to control the growth of undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Since the first application of DDT as an insecticide in the early 1930's, there have been almost 60,000 pesticide formulations registered, each containing at least one of the approximately 800 different basic pesticide compounds (Goerlitz and Brown, 1972, p. 24). The United States annually produces about 1 billion pounds of these compounds. Although efforts are being made to substitute many of the chlorinated hydrocarbon pesticides with more specific, fast-acting, and easily degradable compounds, chlorinated hydrocarbon pesticides are still commonly used in many areas of the country.

Radiochemical program is a network of regularly sampled water-quality stations where additional samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Radioisotopes are isotope forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus. For example, ordinary chlorine is a mixture of isotopes having atomic weights 35 and 37, with the natural mixture having atomic weight about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron (Rose, 1966). There are 275 isotopes of the 81 stable elements in addition to over 800 radioactive isotopes.

Radioisotopes that are determined in this program are those of uranium in micrograms per litre, radium as radium-226 in picocuries per litre, gross beta radiation as strontium/yttrium-90 in picocuries per litre, and gross alpha radiation as micrograms of uranium equivalent per litre.

A picocurie (PC/L, pCi/l) is one millionth of the amount of radioactivity represented by a microcurie, which is the quantity of radiation represented by one millionth of a gram of radium-226. A picocurie of radium results in 2.22 disintegration per minute.

DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of water-quality stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each water-quality station, gaging station, and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 09380000, which appears just to the left of the station name and includes the 2-digit part number "09" plus the 6-digit downstream order number "380000." The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are in Part 9—Colorado River basin. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

Downstream order station numbers are not assigned to sites where only random water-quality samples are taken. These sites are classified as water-quality miscellaneous sites and as a means of location and identification a 15-digit number consisting of the latitude and longitude coordinates to the nearest second for each site plus a 2-digit sequential number are assigned. For example, the station number for a water-quality miscellaneous site with lat 34°28'47", long 112°41'04" would be 342847112410400.

COLLECTION AND EXAMINATION OF DATA

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment discharges. Discharge records for streams in Arizona have been released in the report, "Water Resources Data for Arizona, 1973, Part 1. Surface Water Records."

The data in this report include a description of the sampling station and tabulations of the samples analyzed. The description of the sampling station gives the location, drainage area, periods of record for the various water-quality data, extremes of the pertinent data, and general remarks, in a format similar to that used for streamflow gaging stations.

Water-quality information is presented for chemical quality, microbiological, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics, such as hardness, sodium adsorption ratio, specific conductance, and pH. Microbiological information includes quantitative identification of certain bacteriological indicator organisms. Water-temperature data represent once-daily observations except for stations where a continuous temperature recorder furnishes information from which daily minimums and maximums are obtained. Fluvial-sediment information is given for suspended-sediment discharges and concentrations and for particle-size distribution of suspended sediment and bed material.

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the U. S. Geological Survey began reporting data for chemical constituents and concentrations of suspended sediment in milligrams per litre (mg/l) and water temperatures in degrees Celsius (centigrade, °C). In waters with a density of 1. 000 g/ml (grams per millilitre), parts per millions and milligrams per litre can be considered equal. In waters with a density greater than 1. 000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per litre. Temperature reported in degrees Celsius may be converted to degrees Fahrenheit by using table 3.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per litre instead of milligrams per litre. (See section entitled "Definition of Terms.")

Solutes

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge depending on the source of material and the turbulence and the mixing of the stream. Some must be sampled at several verticals across the channel to determine accurately the solute load.

Table 3.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*

(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

The daily chemical-quality data in this report represent equal-volume composites for 2- to 30-day periods; the composite periods are selected on the basis of specific conductance of the daily samples and fluctuation of water discharge.

At many sites chemical-quality data were collected less frequently than daily. Although the data represent conditions only at the time of sampling, observations obtained over a period of years show relations that are useful in predicting the long-term chemical-quality characteristics.

When dissolved solids are reported in an analysis as both "residue at 180°C" and "sum of constituents," the values for "tons per day" and "tons per acre-foot" are calculated using the "residue at 180°C."

Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for surface-water stations. For daily stations, the water temperatures are usually taken at about the same time each day when sample is collected. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment-discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment discharges for other periods of similar water discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

WATER-SUPPLY PAPERS

Table 4 shows the annual series of water-supply papers that give information on quality of surface waters in Arizona. Data for the Colorado River basin are given in Part 9.

Table 4.--Annual series of water-supply papers on quality of surface waters in Arizona

Water year	Water-supply paper number	Water year	Water-supply paper number
1941	A942	1955	C1403
1942	A950	1956	C1453
1943	A970	1957	C1523
1944	A1022	1958	C1574
1945	A1030	1959	C1645
1946	A1050	1960	C1745
1947	A1102	1961	C1885
1948	B1133	1962	C1945
1949	B1163	1963	C1951
1950	C1189	1964	D1958
1951	C1200	1965	D1965
1952	C1253	1966	D1995
1953	C1293	1967	D2015
1954	C1353	1968	E2098

A Parts 1-14.
B Parts 7-14.
C Parts 9-14.
D Parts 9-11.
E Parts 9-10.

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__________ 1959, Federal inter-agency sedimentation instruments and reports: Rept. AA.

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Table 5.--Factors for conversion of English units to International System (SI) Units

[The following factors may be used to convert the English units published herein to the International System of Units (SI)]

Multiply English units	By	To obtain SI units
feet (ft)	0.3048	metres (m)
miles (mi)	1.609	kilometres (km)
acres	4047	square metres (m^2)
	.4047	*hectares (ha)
	.4047	square hectometre (hm^2)
	.004047	square kilometres (km^2)
square miles (mi^2)	2.590	square kilometres (km^2)
cubic feet (ft^3)	28.32	cubic decimetres (dm^3)
	.02832	cubic metres (m^3)
cfs-day (ft^3/s-day)	2447	cubic metres (m^3)
	2.447×10^{-3}	cubic hectometres (hm^3)
acre-feet (acre-ft)	1233	cubic metres (m^3)
	1.233×10^{-3}	cubic hectometres (hm^3)
	1.233×10^{-6}	cubic kilometres (km^3)
cubic feet per second (ft^3/s)	28.32	litres per second (l/s)
	28.32	cubic decimetres per second (dm^3/s)
	.02832	cubic metres per second (m^3/s)
ton (short)	.9072	tonne (t)

*The unit hectare is approved for use with the International System (SI) for a limited time.

COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, ARIZ.
(Irrigation network station)

LOCATION.--Lat 36°51'53", long 111°35'15", in NE¼SE¼ sec.13, T.40 N., R.7 E., Coconino County, in Navajo Indian Reservation, at gaging station at head of Marble Gorge at Lees Ferry, 0.8 mi (1.3 km) upstream from Paria River, 16 mi (26 km) downstream from Glen Canyon Dam, 28 mi (45 km) downstream from Utah-Arizona State line, and 61.5 mi (99.0 km) upstream from Little Colorado River.

DRAINAGE AREA.--107,900 mi^3 (279,500 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: January to July 1926, October 1926 to June 1927, October 1928 to September 1930, November 1942 to October 1945, October 1947 to September 1973.
Water temperatures: July 1949 to September 1973.
Sediment records: October 1928 to December 1933, November 1942 to September 1944, October 1947 to September 1973.

EXTREMES.--1972-73.
Specific conductance: Maximum daily, 1,100 micromhos Apr. 2; minimum daily, 750 micromhos Oct. 5, 6, 9.
Water temperatures: Maximum, 12.0°C Oct. 8, 9, 15, 19; minimum, 5.5°C Apr. 27, 29.

Period of record:
Specific conductance: Maximum daily, 1,260 micromhos Apr. 20, 21, 1967; minimum daily, 460 micromhos Aug. 10, 1965.
Water temperatures: Maximum, 21.0°C on several days during August, September, and October, 1965, 1967, 1968; minimum, 2.0°C Jan. 29, 30, 1970.

REMARKS.--Because of the regulation of flow by Glen Canyon Dam since Mar. 13, 1963, and the subsequent filling of Lake Powell, extreme values for the period of record include only those obtained after July 31, 1965. Daily specific conductance values for water years 1971-73 are field determinations.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	1130	9850	8.5	30	69	23	67	3.7	151
NOV.									
03...	0820	2490	8.5	20	72	24	72	3.9	156
DEC.									
01...	1440	22000	8.4	9	68	24	74	5.2	154
JAN.									
10...	1030	21900	8.1	30	63	23	70	4.0	153
FEB.									
05...	1130	16400	9.0	30	71	24	72	5.4	149
MAR.									
05...	0800	2450	8.1	30	73	25	78	4.0	164
APR.									
03...	1445	30000	8.1	20	81	28	86	4.1	171
MAY									
09...	0745	6450	7.9	9	79	27	82	4.5	168
JUNE									
01...	1010	4200	8.1	9	75	25	78	3.8	166
JULY									
02...	1045	7160	7.6	40	75	25	72	3.6	133
AUG.									
01...	1525	11400	7.8	10	75	25	74	3.5	163
SEP.									
04...	1840	16000	7.5	10	77	25	78	4.0	162

09380000 COLORADO RIVER AT LEES FERRY, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)
OCT. 02...	0	220	42	.4	--	--	.38	.00	90
NOV. 03...	0	240	47	.3	2.5	.0	.56	.34	960
DEC. 01...	0	230	45	.3	2.3	.0	.52	1.9	90
JAN. 10...	0	230	45	.3	2.2	.0	.49	.06	90
FEB. 05...	0	240	50	.4	2.4	.0	.54	2.5	100
MAR. 05...	0	250	51	.4	2.9	.0	.65	.37	90
APR. 03...	0	270	55	.3	2.4	.0	.54	.03	130
MAY 09...	0	260	53	.0	2.3	.0	.53	.95	100
JUNE 01...	0	230	47	.5	2.4	.0	.55	.09	90
JULY 02...	15	250	50	.3	2.3	.0	.51	.03	120
AUG. 01...	0	230	43	.3	2.3	.0	.52	.00	60
SEP. 04...	0	250	46	.3	2.4	.0	.56	.03	80

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT. 02...	528	510	.72	270	140	1.8	808	7.6
NOV. 03...	636	551	.87	280	150	1.9	851	7.6
DEC. 01...	572	537	.78	270	140	2.0	834	7.4
JAN. 10...	536	523	.73	250	130	1.9	834	8.2
FEB. 05...	584	552	.79	280	150	1.9	853	7.3
MAR. 05...	637	577	.87	290	150	2.0	915	7.8
APR. 03...	618	622	.84	320	180	2.1	956	7.9
MAY 09...	651	602	.89	310	170	2.0	922	8.0
JUNE 01...	618	554	.84	290	150	2.0	915	7.6
JULY 02...	617	567	.84	290	160	1.8	888	8.4
AUG. 01...	680	541	.92	290	160	1.9	877	8.1
SEP. 04...	598	570	.81	300	160	2.0	878	7.3

COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, ARIZ.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
OCT.							
09...	1150	13000	750	7.7	12.0	--	6.0
NOV.							
03...	0820	2490	880	7.8	10.0	--	--
DEC.							
01...	1440	22000	850	7.2	10.0	8.0	7.0
JAN.							
10...	1030	21900	800	8.0	7.5	--	6.0
FEB.							
05...	1130	16400	800	7.0	7.5	.5	7.0
MAR.							
05...	0800	2450	800	7.6	7.5	2.0	7.0
APR.							
03...	1445	30000	1000	7.9	7.0	--	9.0
MAY							
09...	0745	6450	940	7.9	7.5	20.0	8.0
JUNE							
01...	1010	4200	920	8.0	7.5	27.0	8.0
JULY							
02...	1045	7160	960	7.7	8.5	32.0	8.0
SEP.							
04...	1840	16000	--	--	10.5	32.0	--

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	780	820	930	---	850	860	1000	[illegible]	930	1000	[illegible]	---
2	800	820	930	800	840	880	1100	[illegible]	[illegible]	[illegible]	---	[illegible]
3	800	830	930	800	---	900	1000	960	970	1000	930	---
4	800	---	920	800	---	900	1000	1000	990	---	860	960
5	750	---	920	760	880	900	1000	1000	---	920	870	930
6	750	840	910	790	870	930	1000	990	930	---	860	890
7	800	820	900	800	850	940	1000	980	---	920	870	870
8	780	820	880	820	830	930	950	960	---	910	880	890
9	750	850	910	820	850	920	950	960	---	920	860	880
10	810	---	900	830	860	900	950	980	920	920	880	880
11	820	850	880	850	860	890	950	980	---	920	890	860
12	---	830	890	840	850	890	950	980	---	910	880	860
13	---	760	890	850	820	900	960	980	910	900	830	870
14	---	850	900	830	800	900	950	980	---	900	---	890
15	830	850	910	800	830	880	---	980	---	900	840	---
16	860	850	900	850	850	900	930	980	920	900	900	880
17	850	---	900	800	810	900	940	1000	---	900	860	880
18	850	---	880	850	850	910	920	1000	900	900	---	920
19	840	---	880	850	---	950	930	980	900	900	---	890
20	820	---	870	800	850	950	---	950	980	---	---	880
21	800	---	870	800	850	930	930	920	950	1000	---	880
22	800	---	880	800	870	930	---	920	900	1100	---	880
23	820	---	880	800	840	920	920	930	930	---	---	880
24	880	---	880	900	850	920	920	930	930	880	---	870
25	890	850	---	850	850	910	930	930	900	900	---	870
26	860	850	850	850	820	900	930	920	900	900	---	870
27	860	820	850	850	810	900	930	920	900	900	---	860
28	860	820	---	880	810	950	920	920	920	910	---	870
29	850	880	850	880	---	1000	920	910	920	900	---	870
30	850	820	850	880	---	1000	930	920	920	900	---	860
31	830	---	---	880	---	1000	---	940	---	---	---	---
MEAN	821	---	891	830	843	919	956	958	---	928	---	882
YEAR	MAX	1100	MIN	750	MEAN	891						

09380000 COLORADO RIVER AT LEES FERRY, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.0	10.0	10.0	---	7.5	8.0	7.5	6.0	7.5	8.0	8.5	---
2	11.0	10.0	10.0	8.0	7.5	8.0	7.0	6.0	8.0	---	---	---
3	11.0	10.0	10.0	8.0	---	8.0	7.0	6.5	8.0	8.0	8.5	---
4	11.0	---	9.0	8.0	7.5	8.0	7.0	6.5	7.0	---	9.0	10.5
5	11.0	---	8.0	8.0	7.5	7.5	7.0	6.5	---	8.5	9.0	10.0
6	11.0	10.0	8.0	8.5	7.5	7.5	7.0	6.0	8.0	---	10.0	10.5
7	11.5	10.5	9.0	8.5	8.0	7.5	7.0	6.5	---	8.5	10.0	10.0
8	12.0	10.0	8.0	8.0	8.0	8.0	7.5	7.0	---	8.5	10.0	10.0
9	12.0	10.0	8.0	8.0	8.0	8.0	7.5	7.0	---	9.0	9.5	9.5
10	11.0	---	8.0	7.5	8.0	7.5	7.5	7.5	8.0	8.5	9.5	10.5
11	11.0	10.0	8.5	7.5	8.0	7.5	7.0	7.5	---	8.5	9.0	10.5
12	---	10.0	8.5	7.5	8.0	7.5	7.0	8.0	---	8.5	9.0	9.5
13	---	9.0	9.0	7.5	8.0	8.0	8.0	7.5	8.0	9.0	9.5	9.5
14	---	10.0	9.0	7.0	8.0	8.0	8.5	7.5	---	8.5	---	9.0
15	12.0	10.0	8.5	7.0	8.0	7.5	---	8.0	---	9.0	9.0	8.5
16	11.0	10.0	8.5	7.5	8.0	7.5	7.5	6.5	7.5	8.5	10.0	9.0
17	11.0	---	9.0	7.5	8.0	7.5	6.5	6.5	---	9.0	9.0	---
18	11.0	---	9.0	8.0	8.0	7.0	6.5	6.5	8.0	9.0	---	---
19	12.0	---	9.0	8.0	---	7.0	6.5	6.5	7.5	9.0	---	---
20	11.5	---	9.0	7.5	8.0	7.0	---	7.0	8.0	---	---	---
21	11.0	---	9.0	8.0	8.0	7.0	6.0	7.5	8.0	9.0	---	---
22	11.0	---	9.0	8.0	8.0	7.0	---	7.0	8.5	9.0	---	---
23	11.0	---	9.0	8.0	8.0	7.0	6.0	7.5	8.5	---	---	---
24	11.0	---	9.5	8.0	7.0	7.0	6.0	8.0	8.5	8.0	---	---
25	11.0	10.0	---	7.5	7.5	7.0	6.0	7.5	8.5	8.0	---	9.5
26	11.0	9.0	8.0	7.5	7.5	7.5	6.0	7.5	8.5	8.5	---	9.0
27	11.0	9.0	8.5	7.5	7.5	8.0	5.5	7.5	8.5	8.0	---	8.5
28	11.0	9.0	---	8.0	7.5	7.0	6.0	7.5	8.5	8.5	---	9.0
29	10.0	9.0	8.0	7.5	---	7.0	5.5	7.5	8.5	8.0	---	10.0
30	9.5	9.5	8.0	7.5	---	7.0	6.0	8.0	8.5	8.5	---	10.0
31	10.0	---	8.0	7.5	---	7.0	---	8.0	---	---	---	---
MEAN	11.0	---	8.5	8.0	8.0	7.5	7.0	7.0	---	8.5	---	---
YEAR	MAX	12.0	MIN	5.5	MEAN	8.5						

PERIODIC DAILY SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
OCT.			
03...	11800	6	191
09...	12700	5	171
20...	7700	52	1080
NOV.			
01...	12600	105	3570
08...	12300	10	332
16...	16400	14	620
DEC.			
01...	17600	35	1660
10...	14800	32	1280
20...	18500	41	2050
24...	6440	9	156
JAN.			
02...	20900	15	846
14...	8880	9	216
21...	14400	11	428
FEB.			
01...	17900	107	5170
11...	6890	6	112
20...	19700	3	160
MAR.			
01...	9740	32	842
19...	16400	180	7970
23...	27200	178	13100
APR.			
01...	25700	138	9580
10...	29300	197	15600
19...	28600	148	11400
MAY			
01...	27700	244	18200
12...	6890	155	2880
24...	12100	230	7510
JUNE			
01...	9940	79	2120
18...	11400	16	492
JULY			
01...	9020	16	390
24...	8110	22	482
AUG.			
04...	8670	69	1620
15...	10300	106	2950
SEP.			
04...	7630	11	227
13...	7230	13	254

09382000 PARIA RIVER AT LEES FERRY, ARIZ.

LOCATION.--Lat 36°52'20", long 111°35'38", in NW¼NE¼ sec.13, T.40 N., R.7 E., Coconino County, at gaging station 0.6 mi (1.0 km) northwest of Lees Ferry, and 1.1 mi (1.8 km) upstream from mouth.

DRAINAGE AREA.--1,410 mi^2 (3,652 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1947 to February 1950, October 1969 to September 1972.
Specific conductance: October 1964 to September 1973.
Water temperatures: October 1956 to September 1973.
Sediment records: October 1947 to September 1973.

EXTREMES.--1972-73:
Specific conductance: Maximum daily, 3,200 micromhos Sept. 14; minimum daily, 540 micromhos Oct. 15.
Water temperatures: Maximum, 35.0°C June 27; minimum, freezing point on many days in January and February.
Sediment concentrations: Maximum daily, 780,000 mg/l Oct. 20; minimum daily, 92 mg/l Sept. 10.
Sediment discharge: Maximum daily, 1,740,000 tons Oct. 19; minimum daily, 1.4 tons Sept. 30.

Period of record:
Specific conductance: Maximum daily, 4,750 micromhos July 19, 1971; minimum daily, 320 micromhos May 21, 1967.
Water temperatures (1956-61, 1965-73): Maximum, 38.0°C June 18, 1972; minimum, freezing point on many days during winter months.
Sediment concentrations: Maximum daily, 780,000 mg/l Aug. 9, 1968, Oct. 20, 1972; minimum daily, 1 mg/l June 1-10, 1950.
Sediment discharge: Maximum daily, 5,100,000 tons Sept. 12, 1958; minimum daily, 0 tons on many days of most years.

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100	1350	1220	---	1180	1450	1800	1280	850	664	615	---
2	1100	1400	1200	1100	1290	1500	1780	1150	1200	573	---	---
3	1000	1350	1200	950	---	1300	1800	1200	1190	570	558	---
4	800	---	1220	940	---	1500	1900	1250	1220	578	572	1220
5	950	---	1160	830	1250	---	1980	1250	---	---	1030	1170
6	2000	1300	1020	810	1200	1450	1700	1200	1010	---	757	1000
7	1200	1300	1010	800	1170	1620	1800	1500	---	563	2780	960
8	1420	1300	910	900	1200	1650	1600	1700	---	556	1920	890
9	1400	1300	1180	1180	1320	1600	1650	1250	---	552	1430	780
10	1350	---	---	1200	1350	1680	1850	---	---	1200	1220	750
11	1300	1250	1200	1080	1300	1650	---	1190	---	1240	877	1450
12	---	1100	1180	1200	1350	1600	1580	1220	---	1250	709	2700
13	---	1080	850	1180	1350	1650	1600	1180	---	1250	671	2700
14	---	1190	810	1180	1350	2000	1590	1150	---	824	720	3200
15	540	1300	690	1140	1320	2020	---	1200	---	839	877	---
16	2000	1410	1200	1150	1400	1820	1650	1380	990	824	863	1600
17	1500	---	1650	1080	1420	2100	1600	1420	---	824	685	---
18	1190	---	1450	1020	1400	1900	1480	1500	950	653	---	890
19	1600	---	1420	1150	1390	1950	1350	1110	890	631	---	1250
20	1920	---	1400	1180	1250	1680	---	975	620	---	---	1000
21	1600	---	1250	1250	1210	1620	1690	1050	600	597	---	1000
22	1580	---	1200	1120	1230	1600	---	1000	600	606	---	950
23	1550	---	1250	1150	1270	1850	1410	900	580	---	---	950
24	1580	---	1280	1250	1400	1880	1400	930	580	---	---	990
25	1450	1400	---	1200	1500	1650	1480	1000	580	606	---	990
26	1400	1510	1220	1050	1550	1680	1500	1080	600	606	---	970
27	1450	1590	1350	1210	1480	1800	1450	---	590	606	---	970
28	1420	1390	---	1200	1450	1820	1400	---	610	606	---	980
29	1400	1350	1380	1220	---	1800	1450	840	610	606	---	900
30	1420	1280	1300	1150	---	1850	1400	1180	600	602	---	900
31	1350	---	1250	1180	---	1820	---	920	---	---	---	---
MEAN	1380	---	1190	1100	1330	1720	1610	1180	---	737	---	1250
YEAR	MAX	3200	MIN	540	MEAN	1240						

09382000 PARIA RIVER AT LEES FERRY, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	5.0	2.0	---	3.0	7.5	11.0	15.0	20.5	34.0	33.5	---
2	18.0	13.0	3.5	0.0	0.0	8.0	11.0	17.0	21.0	27.0	---	---
3	---	6.0	6.0	0.0	---	8.0	12.0	17.0	20.0	26.0	27.5	---
4	20.0	---	4.0	0.0	---	7.0	10.0	15.0	21.5	24.0	27.5	29.0
5	15.0	---	3.0	0.0	1.0	---	7.0	12.0	---	---	27.0	19.0
6	11.5	8.0	3.0	0.0	4.0	9.0	9.0	19.5	28.0	---	26.0	28.0
7	18.0	8.0	5.0	0.0	8.0	9.0	10.0	15.5	---	30.0	27.0	29.5
8	15.0	8.0	4.0	0.0	10.0	8.0	11.0	17.5	---	29.5	27.5	27.5
9	16.0	7.5	2.0	0.0	4.5	11.5	7.0	21.0	---	26.0	26.0	29.0
10	20.0	---	---	0.0	5.0	13.0	13.0	---	27.0	24.0	32.0	19.5
11	14.5	8.0	0.0	0.0	4.0	10.0	17.0	24.5	---	30.0	31.0	20.5
12	---	7.0	0.0	1.0	3.0	9.0	17.0	25.0	---	27.0	29.0	19.5
13	---	6.0	1.0	0.0	5.0	6.5	18.0	24.0	---	29.0	29.0	26.5
14	---	7.5	1.5	0.0	5.0	12.0	10.5	24.0	---	28.0	27.0	19.5
15	13.0	9.0	0.5	0.0	12.0	8.0	---	---	---	29.0	27.0	---
16	16.0	9.0	1.0	1.5	11.0	8.5	9.0	20.0	27.0	28.0	28.0	26.5
17	15.0	---	0.0	3.0	11.0	8.0	10.0	20.0	---	28.0	27.5	26.5
18	15.0	---	1.0	5.5	11.0	8.5	14.5	20.5	26.0	27.0	---	26.5
19	14.0	---	2.0	5.0	10.0	9.0	9.0	---	26.5	27.0	---	26.5
20	13.0	---	4.5	7.0	8.0	8.0	---	26.0	30.0	---	---	26.0
21	13.0	---	4.0	6.0	8.5	5.0	16.5	17.0	30.0	30.0	---	25.0
22	15.0	---	3.5	3.0	7.5	8.0	---	24.0	31.0	31.0	---	23.0
23	14.0	---	4.5	0.0	7.0	8.0	12.5	19.0	32.0	---	---	23.0
24	12.0	---	3.0	1.0	10.0	11.0	13.0	20.0	32.0	---	---	25.0
25	12.0	7.0	---	0.0	7.0	11.0	13.0	20.0	33.0	28.0	---	17.5
26	13.5	9.0	3.0	2.5	6.0	10.0	13.5	19.5	34.0	31.0	---	18.0
27	12.0	9.0	3.0	0.0	9.0	12.0	13.5	---	35.0	30.0	---	20.0
28	12.5	3.0	---	0.0	7.5	12.0	14.5	---	34.0	23.0	---	21.5
29	11.0	3.0	3.0	0.0	---	7.5	17.5	22.0	34.0	21.5	---	22.5
30	8.5	6.0	2.0	1.0	---	14.0	14.5	26.5	34.0	19.5	---	24.0
31	6.0	---	2.0	0.0	---	14.0	---	22.0	---	---	---	---
MEAN	14.0	---	2.5	1.0	7.0	9.5	12.5	20.0	---	27.5	---	24.0
YEAR	MAX	35.0	MIN	0.0	MEAN	14.5						

SUSPENDED-SEDIMENT 'DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	7.4	168	3.4	13	950	33	23	4300	267
2	7.8	157	3.3	13	1700	60	23	3100	201
3	8.6	178	4.1	16	1550	67	22	2060	126
4	16	590	31	15	1400	57	27	2420	188
5	266	62500	53500	14	1300	49	119	22600	8380
6	93	63500	15900	16	1200	52	33	11700	1040
7	139	52600	19900	16	2700	117	13	3100	109
8	91	33700	8520	13	2200	77	11	1500	44
9	69	35600	7050	14	2100	79	21	2100	119
10	16	52000	2250	15	1900	77	7.4	2100	42
11	13	44500	1560	16	1800	78	13	2000	70
12	11	25400	754	57	5410	963	10	1800	49
13	10	11900	321	76	7920	1640	10	4700	127
14	9.8	4100	108	36	6900	671	9.0	2500	61
15	451	68100	272000	36	6950	676	12	900	29
16	496	156000	248000	38	6100	626	13	1850	65
17	52	47500	7390	65	5400	1120	14	2600	98
18	52	31100	8390	81	5500	1200	16	1950	84
19	2320	243000	1740000	42	4300	488	20	1050	57
20	691	780000	267000	59	4500	717	21	950	54
21	274	68800	55400	46	4450	553	24	1500	97
22	67	29000	5660	42	3700	420	28	1500	116
23	35	8000	756	36	3100	301	29	2230	201
24	31	5390	451	30	2700	219	36	3850	404
25	29	2900	227	23	2100	130	34	3810	361
26	25	1850	125	20	1900	103	31	3340	280
27	21	1450	82	24	1800	117	25	1860	119
28	18	1050	51	31	3250	272	27	1220	101
29	19	950	49	20	2450	132	33	950	85
30	18	1550	75	18	4480	217	14	600	23
31	16	1200	52	--	--	--	8.2	600	13
TOTAL	5372.6	--	2715612.8	941	--	11311	726.6	--	13010

09382000 PARIA RIVER AT LEES FERRY, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	9.0	500	12	18	640	31	152	41200	17200
2	10	610	16	18	420	20	172	36600	17600
3	7.8	260	5.5	20	360	19	147	32000	12700
4	12	350	11	20	320	17	90	22000	5420
5	8.3	330	7.4	23	750	46	65	16100	2820
6	4.5	340	4.1	32	1690	146	42	8100	918
7	7.0	1150	22	28	1400	106	44	8000	950
8	14	2250	85	40	1460	158	92	19100	4740
9	18	1250	61	49	9500	1260	68	11200	2060
10	20	510	28	74	14500	2900	70	11900	2250
11	18	510	25	67	6500	1180	83	20300	4890
12	18	530	26	59	5000	796	117	29400	9750
13	19	530	27	74	8300	1660	157	29800	12600
14	19	520	27	55	8500	1260	73	13200	2600
15	19	600	31	45	8500	1030	41	7700	852
16	21	505	29	57	7700	1180	26	5700	400
17	21	410	23	44	7300	867	103	37600	16100
18	16	750	32	38	5500	564	133	60900	23300
19	18	480	23	34	4900	450	120	43900	14200
20	18	330	16	30	4000	324	116	45800	17800
21	17	360	16	33	2500	223	130	59400	22300
22	15	330	13	35	2500	236	102	34600	9530
23	12	270	8.7	50	7780	1150	122	33000	10900
24	8.0	350	7.6	65	6440	1120	87	22600	5800
25	12	550	18	126	40400	14800	76	29900	6210
26	17	620	28	153	46700	19500	74	26900	6160
27	19	800	41	178	56400	29400	77	26800	5570
28	16	680	29	145	39600	16300	90	28600	8080
29	17	510	23	--	--	--	100	34400	9290
30	17	510	23	--	--	--	43	12000	1390
31	19	850	44	--	--	--	37	6700	669
TOTAL	466.6	--	762.3	1610	--	96743	2849	--	255049

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	47	11000	1400	40	12900	1390	11	3950	117
2	62	17400	2980	30	8700	705	17	5200	239
3	30	11000	891	24	4200	272	16	5250	227
4	32	7200	622	20	2900	157	22	5500	336
5	36	9000	875	19	3300	169	35	6850	657
6	44	31900	4150	37	8700	1140	15	5650	229
7	85	53400	12400	37	9200	919	13	4950	174
8	60	29400	4760	29	6500	509	9.0	4800	117
9	24	25100	1630	23	8000	497	8.0	4700	102
10	31	22000	1840	17	9000	413	6.8	4500	83
11	71	30400	5830	14	8000	302	6.8	4000	73
12	104	32300	9350	17	7900	363	6.2	4000	67
13	127	46100	16200	51	12600	2120	7.4	4500	90
14	131	54400	19900	21	10600	601	8.6	3500	81
15	100	54200	14600	28	10900	824	9.0	3500	85
16	52	43300	6080	17	16900	776	8.2	3700	82
17	49	19800	2620	13	21000	737	7.8	3000	63
18	72	12700	2570	13	21800	765	6.2	2000	33
19	86	9550	2610	11	9800	291	6.0	1900	31
20	40	12000	1300	9.8	5000	132	5.5	1030	15
21	24	26000	1680	11	3900	116	5.0	670	9.0
22	26	18700	1310	13	3800	133	4.5	810	9.8
23	26	5000	351	16	6000	259	4.4	1080	13
24	31	4800	402	16	5200	225	4.2	870	9.9
25	34	10500	964	16	10900	471	3.9	670	7.1
26	39	11500	1210	15	15100	612	3.6	510	5.0
27	38	16100	1650	17	13000	597	3.3	570	5.1
28	41	17000	1880	12	8700	282	3.0	620	5.0
29	41	15000	1660	8.6	3000	70	2.9	600	4.7
30	41	15700	1740	8.2	5900	131	2.7	440	3.2
31	--	--	--	7.8	3700	78	--	--	--
TOTAL	1624	--	125455	611.4	--	16056	262.0	--	2972.8

09382000 PARIA RIVER AT LEES FERRY, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.7	390	2.8	3.9	1500	16	8.0	150	3.2
2	2.6	480	3.4	3.9	1000	11	8.0	150	3.2
3	2.4	670	4.3	3.9	800	8.4	8.2	140	3.1
4	2.6	1330	9.3	4.5	900	11	7.8	140	2.9
5	2.4	1300	8.4	13	61900	3000	6.5	143	2.5
6	2.7	870	6.3	16	73400	6640	6.5	111	1.9
7	2.7	390	2.8	22	209000	13400	6.2	109	1.8
8	2.7	280	2.0	13	72000	2530	6.2	103	1.7
9	2.4	460	3.0	7.4	43000	859	6.0	96	1.6
10	3.2	16900	146	6.0	22000	356	6.2	92	1.5
11	3.6	19400	188	3.6	8900	86	80	56900	20400
12	18	22200	1530	3.2	5100	44	40	52000	5800
13	6.2	14600	244	3.2	4500	39	17	26500	1220
14	4.0	4000	43	3.2	4600	40	12	12000	389
15	6.2	2700	45	6.0	21200	343	7.4	710	14
16	5.0	6400	86	6.8	29600	543	4.5	580	7.0
17	4.5	6600	80	8.7	19200	629	8.2	390	8.6
18	4.2	3200	36	21	21600	1400	9.4	310	7.9
19	4.0	1800	19	165	24200	17700	7.8	261	5.5
20	3.9	1700	18	20	6000	324	7.4	177	3.5
21	4.0	1500	16	10	2200	59	7.4	176	3.5
22	4.2	1300	15	429	34700	73000	6.5	194	3.4
23	4.4	1300	15	80	15000	3240	9.4	206	5.2
24	4.4	1500	18	10	5400	146	8.2	671	15
25	4.0	1700	18	7.0	4000	76	7.8	213	4.5
26	3.9	1700	18	7.0	3000	57	7.0	196	3.7
27	3.9	2000	21	7.0	1000	19	6.0	151	2.4
28	3.9	2300	24	7.0	500	9.4	5.8	161	2.5
29	4.4	2900	34	7.0	400	7.6	5.5	111	1.6
30	4.2	3100	35	7.0	300	5.7	5.0	100	1.4
31	3.9	2700	28	8.0	200	4.3	--	--	--
TOTAL	131.2	--	2719.3	913.3	--	124603.4	331.9	--	27922.1

TOTAL DISCHARGE FOR YEAR (CFS-DAYS) 15839.6
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS) 3392216.7

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
(ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
AUG. 07...	1645	27.0	19	166000	8520	46	62	82	95	98	100

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.

LOCATION.--Lat 36°06'05", long 112°05'08", in sec.5, T.31 N., R.3 E. (unsurveyed), Coconino County, at gaging station in Grand Canyon National Park, on left bank, 0.2 mi (0.3 km) upstream from Kaibab Bridge, 0.4 mi (0.6 km) upstream from Bright Angel Creek, 4.5 mi (7.2 km) northeast of village of Grand Canyon, 26 mi (42 km) downstream from Little Colorado River, 104 mi (167 km) downstream from Glen Canyon Dam, and 267 mi (430 km) upstream from Hoover Dam.

DRAINAGE AREA.--137,800 mi^2 (356,900 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: August 1925 to November 1942, September 1943 to September 1973.
Water temperatures: October 1936 to October 1942, September 1943 to September 1973.
Sediment records: October 1925 to November 1942, September 1943 to September 1972.

EXTREMES.--1972-73:
Specific conductance: Maximum daily, 1,300 micromhos Oct. 5; minimum daily, 800 micromhos Oct. 24, Dec. 3, 5, May 9.
Water temperatures: Maximum, 14.0°C on several days during July, August, and September; minimum, 6.0°C Jan. 2.

Period of record:
Specific conductance: Maximum daily, 1,570 micromhos Jan. 30, 1968; minimum daily, 561 micromhos Sept. 3, 1965.
Water temperatures: Maximum, 23.0°C Sept. 4, 1967, Sept. 9, 10, 1968; minimum, 4.0°C Jan. 4, 1968, Jan. 7, 1968.

REMARKS.--Because of the regulation of flow by Glen Canyon Dam since Mar. 13, 1963, and the subsequent filling of Lake Powell, extreme values for the period of record include only those obtained after July 31, 1965. Daily specific conductance values for water years 1971-73 are field determinations.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)
OCT.									
05...	0815	17900	12	20	71	14	200	5.1	234
NOV.									
16...	1255	22100	8.8	20	72	25	83	4.1	164
DEC.									
09...	1300	23400	8.5	20	73	25	85	4.1	160
JAN.									
25...	1115	24100	9.2	--	73	25	80	3.8	163
FEB.									
21...	1400	22700	8.1	70	74	24	86	3.7	169
MAR.									
11...	1245	10100	8.3	9	77	23	100	4.1	183
APR.									
09...	1100	27400	8.2	9	84	26	90	4.1	172
JUNE									
03...	1430	10700	8.2	20	79	27	100	4.0	190
JULY									
03...	1930	13600	7.6	60	76	26	84	3.6	168
AUG.									
13...	1200	2140	7.9	60	79	26	98	3.6	177
SEP.									
08...	1330	13600	7.9	10	79	27	97	4.0	175

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS. SOLVED NITRATE (NO3) (MG/L)	DIS. SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)
OCT.									
05...	0	180	190	.5	--	--	.60	.03	190
NOV.									
16...	0	240	63	.4	2.3	.0	.53	.03	90
DEC.									
09...	0	240	61	.3	2.5	.0	.57	.00	140
JAN.									
25...	0	230	62	.4	2.4	.0	.54	.00	100
FEB.									
21...	0	230	62	.5	2.2	.0	.51	.00	100
MAR.									
11...	0	240	68	.2	2.4	.0	.55	.06	120
APR.									
09...	0	270	66	.3	3.0	.0	.68	.03	90
JUNE									
03...	0	250	94	.5	2.3	.0	.53	.00	120
JULY									
03...	0	250	64	.4	2.1	.0	.48	.03	110
AUG.									
13...	0	290	86	.2	2.7	.0	.60	.00	120
SEP.									
08...	0	250	89	.4	2.3	.0	.51	.03	80

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA+MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.								
05...	824	791	1.12	230	43	5.7	1383	7.8
NOV.								
16...	652	582	.89	280	150	2.1	922	8.1
DEC.								
09...	648	581	.88	290	150	2.2	903	7.9
JAN.								
25...	--	568	.77	290	150	2.1	834	8.0
FEB.								
21...	643	576	.87	280	150	2.2	940	8.0
MAR.								
11...	619	632	.84	290	140	2.6	1000	7.9
APR.								
09...	696	640	.95	320	180	2.2	1000	7.8
JUNE								
03...	688	661	.94	310	150	2.5	1060	7.8
JULY								
03...	630	597	.86	300	160	2.1	937	8.1
AUG.								
13...	664	641	.90	300	160	2.4	1020	8.3
SEP.								
08...	633	643	.86	310	170	2.4	1020	8.2

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	980	---	950	1000	900	1000	990	960	860	920	980	950
2	980	---	880	1000	900	1000	980	850	1000	960	1000	900
3	1000	---	800	850	900	1050	1000	810	1000	900	960	960
4	900	---	900	880	920	1200	1000	810	1000	950	1000	1000
5	1300	---	800	880	---	980	950	860	980	1000	950	1000
6	950	---	900	850	---	920	950	900	950	900	1000	---
7	850	---	920	880	---	920	960	890	920	920	1000	990
8	950	---	900	900	---	1000	980	810	900	950	950	1000
9	1100	---	900	850	---	950	980	800	900	950	950	960
10	900	---	900	850	---	1000	900	820	920	920	950	1000
11	1000	---	950	880	---	1000	950	890	1000	920	980	1000
12	900	---	900	---	---	1000	950	890	910	900	1000	980
13	980	---	900	850	---	1000	920	880	970	920	1000	990
14	880	---	900	---	---	960	910	880	1000	950	1020	990
15	900	---	900	920	---	960	900	900	910	950	910	1000
16	900	---	---	900	950	1080	880	900	950	1000	940	1090
17	950	---	900	900	1080	1100	850	900	1050	900	950	1000
18	900	---	920	900	1000	1000	860	900	1000	900	---	1100
19	850	---	850	850	950	1000	860	900	950	920	950	1000
20	1200	---	850	900	900	990	890	---	960	920	950	1090
21	1200	---	850	920	900	1000	890	950	950	1000	1050	950
22	980	---	---	---	900	1000	900	950	950	---	---	1000
23	880	---	850	---	900	980	940	990	---	1000	910	950
24	800	---	900	---	950	950	920	950	950	1000	950	960
25	820	---	---	900	1000	920	950	950	950	990	990	1000
26	900	---	980	890	1000	950	900	1000	940	1000	1000	1000
27	1000	---	900	890	1000	950	880	1000	900	1000	1000	1020
28	900	---	---	900	980	960	890	1000	990	1000	1050	1000
29	920	---	880	900	---	960	---	1000	900	1020	990	950
30	1000	---	980	900	---	1000	860	---	950	1000	1000	990
31	920	---	900	900	---	980	---	990	---	1000	1000	---
MEAN	958	---	891	894	---	992	924	908	952	955	979	994
YEAR	MAX	1300	MIN	800	MEAN	946						

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	10.5	9.5	9.0	9.5	9.5	8.0	7.0	6.5	6.5	8.0	7.0
2	12.0	11.0	10.0	9.5	9.5	9.5	7.0	6.0	6.5	6.5	8.0	7.0
3	12.0	11.5	10.5	10.0	9.5	9.5	7.0	6.5	6.5	6.5	8.5	8.0
4	11.5	11.5	10.5	10.0	9.5	9.0	8.0	7.0	6.5	6.5	8.5	8.0
5	13.5	11.5	10.0	10.0	9.0	9.0	8.0	8.0	6.5	6.5	8.0	7.0
6	13.0	11.5	10.0	10.0	9.0	8.5	8.0	8.0	7.0	6.5	8.0	6.5
7	12.0	11.5	10.0	10.0	8.5	8.0	8.0	7.0	6.5	6.5	7.0	7.0
8	14.5	13.5	10.0	10.0	8.5	8.0	7.0	7.0	6.5	6.5	7.0	7.0
9	15.0	13.5	10.0	10.0	8.5	8.5	7.0	7.0	6.5	6.5	7.0	7.0
10	14.5	13.5	10.0	10.0	8.5	8.0	7.0	7.0	7.0	6.5	8.0	7.0
11	13.5	11.5	10.0	10.0	8.0	8.0	7.0	7.0	7.0	6.5	8.0	8.0
12	11.5	11.5	10.0	10.0	8.0	7.0	7.0	7.0	6.5	6.5	8.5	8.0
13	11.5	11.5	10.0	9.5	8.5	8.0	7.0	7.0	7.0	6.5	8.5	7.0
14	11.5	11.0	10.0	9.5	8.5	8.5	7.0	7.0	6.5	6.5	7.0	7.0
15	11.5	11.5	10.0	9.5	8.5	8.5	7.0	7.0	6.5	6.5	8.0	7.0
16	13.0	11.5	10.0	9.5	8.5	8.5	7.0	7.0	6.5	6.5	8.0	7.0
17	13.0	12.0	10.0	10.0	8.5	8.5	7.0	7.0	6.5	6.5	8.5	8.0
18	12.0	11.5	10.0	10.0	8.5	8.5	7.0	7.0	6.5	6.5	8.5	8.0
19	12.0	11.5	10.0	10.0	8.5	8.5	7.0	7.0	7.0	6.5	9.0	8.0
20	13.0	11.5	10.0	9.5	9.0	8.5	7.0	7.0	7.0	6.5	9.0	8.0
21	12.0	11.5	9.5	9.0	9.0	8.5	7.0	6.5	6.5	6.5	8.5	7.0
22	11.5	11.0	9.0	9.0	9.0	9.0	7.0	6.5	6.5	6.5	7.0	7.0
23	12.0	11.0	9.0	9.0	9.0	8.5	6.5	6.5	6.5	6.5	7.0	7.0
24	12.0	11.0	9.0	8.5	8.5	8.5	6.5	6.5	7.0	6.5	8.0	7.0
25	11.0	10.0	9.0	8.5	8.5	8.0	6.5	6.5	7.0	7.0	8.5	7.0
26	10.0	9.5	9.5	9.0	8.5	8.0	6.5	6.5	8.5	7.0	8.5	8.0
27	10.0	10.0	9.5	9.0	8.0	8.0	6.5	6.5	8.5	7.0	8.5	8.0
28	10.5	10.0	9.5	9.0	8.0	8.0	6.5	6.5	8.0	8.0	8.0	8.0
29	10.5	10.0	9.0	9.0	8.5	8.0	6.5	6.5	---	---	8.0	7.0
30	10.5	9.5	9.5	9.0	8.5	8.5	6.5	6.5	---	---	7.0	7.0
31	9.5	9.0	---	---	8.5	8.0	6.5	6.5	---	---	8.0	7.0
MONTH	15.0	9.0	10.5	8.5	9.5	7.0	8.0	6.0	8.5	6.5	9.0	6.5

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.5	7.0	9.0	8.0	10.0	10.0	11.5	11.0	14.0	13.5	12.0	11.5
2	8.0	7.0	9.0	8.0	10.5	10.0	13.0	11.5	13.5	13.0	12.0	12.0
3	7.0	7.0	10.0	9.0	11.0	10.5	12.0	11.5	13.5	13.0	13.0	12.0
4	8.0	7.0	10.5	10.0	11.5	10.5	11.5	11.0	13.0	11.5	13.5	13.0
5	8.5	7.0	10.5	10.0	11.5	11.0	12.0	11.0	12.0	11.5	13.5	13.0
6	8.5	7.0	10.5	9.5	11.0	9.5	12.0	11.5	13.5	12.0	13.5	12.0
7	8.5	8.0	11.0	10.0	10.0	9.5	12.0	11.0	13.5	13.0	13.5	13.0
8	8.5	7.0	11.5	10.5	10.0	9.0	11.0	11.0	13.0	13.0	13.0	12.0
9	8.5	7.0	13.5	11.5	10.0	9.0	11.5	11.0	13.0	12.0	13.5	13.0
10	8.5	8.0	13.5	12.0	10.5	10.0	12.0	11.5	12.0	12.0	13.5	13.5
11	8.5	8.0	13.0	13.0	10.5	10.5	12.0	10.5	12.0	12.0	13.5	13.0
12	8.5	8.0	13.0	12.0	10.5	10.5	11.5	11.0	13.5	12.0	13.5	13.0
13	8.5	8.5	13.0	12.0	10.5	10.0	11.5	10.5	14.0	13.5	14.0	13.0
14	9.0	8.5	13.5	13.0	10.5	10.0	11.5	11.5	14.0	13.5	13.5	13.5
15	9.0	8.0	13.5	11.5	10.5	10.0	12.0	11.5	13.5	12.0	13.5	13.0
16	8.5	8.0	13.0	12.0	11.0	10.5	13.0	12.0	12.0	12.0	13.0	13.0
17	8.5	8.0	12.0	12.0	12.0	11.0	13.0	12.0	12.0	11.0	13.5	13.0
18	8.5	8.5	12.0	11.0	12.0	11.5	12.0	12.0	12.0	11.0	14.0	13.0
19	8.5	8.0	11.5	11.0	13.0	11.5	12.0	12.0	12.0	12.0	13.0	13.0
20	8.0	7.0	10.5	9.5	11.5	10.0	13.0	12.0	13.5	12.0	13.0	12.0
21	8.0	7.0	10.5	10.0	10.5	10.0	13.0	12.0	13.5	12.0	12.0	12.0
22	8.0	7.0	10.5	9.5	10.5	10.5	13.5	12.0	13.0	11.5	12.0	12.0
23	8.5	7.0	10.0	9.5	11.0	10.5	14.0	13.5	12.0	11.0	12.0	12.0
24	8.5	8.0	10.5	9.5	11.0	10.5	14.0	14.0	11.5	11.0	12.0	11.5
25	8.5	8.0	10.5	10.0	12.0	11.0	13.5	13.5	12.0	11.5	12.0	11.5
26	9.0	8.0	10.5	10.0	12.0	11.5	13.5	13.0	13.5	12.0	12.0	11.0
27	9.0	8.5	11.0	10.5	11.5	10.5	13.0	12.0	14.0	12.0	11.0	11.0
28	9.0	8.5	11.5	11.0	11.0	10.0	12.0	11.5	14.0	14.0	11.0	11.0
29	9.0	8.5	11.5	10.5	11.0	10.5	13.0	12.0	14.0	14.0	11.5	11.0
30	9.0	9.0	12.0	11.0	11.0	11.0	14.0	13.0	14.0	13.0	11.5	11.0
31	---	---	11.0	10.0	---	---	14.0	13.5	13.0	12.0	---	---
MONTH	9.0	7.0	13.5	8.0	13.0	9.0	14.0	10.5	14.0	11.0	14.0	11.0
YEAR	15.0	6.0										

09403000 BRIGHT ANGEL CREEK NEAR GRAND CANYON, ARIZ.

LOCATION.--Lat 36°06'11", long 112°05'44", in sec.5, T.31 N., R.3 E. (unsurveyed), Coconino County, at gaging station in Grand Canyon National Park, on right bank 0.4 mi (0.6 km) upstream from mouth, and 4 mi (6 km) northeast of village of Grand Canyon.

DRAINAGE AREA.--101 mi^2 (262 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1952 to September 1973.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
05...	0630	--	7.3	10	41	22	4.6	1.7	226
NOV.									
14...	1420	16	6.3	20	36	21	4.2	1.2	211
DEC.									
09...	1530	29	6.8	9	41	21	5.5	1.3	232
JAN.									
25...	1230	30	7.0	9	41	22	5.2	1.2	233
FEB.									
21...	1500	32	6.1	9	39	22	5.2	1.1	226
MAR.									
11...	1330	22	5.9	9	46	23	4.6	1.4	213
APR.									
09...	1705	--	5.8	20	38	25	4.3	1.7	216
MAY									
02...	1525	160	5.8	30	26	10	1.9	.8	118
JUNE									
03...	1835	--	5.6	30	24	10	1.4	.6	124
JULY									
03...	2030	30	5.1	30	35	18	2.8	1.1	182
AUG.									
14...	0935	23	5.7	10	34	20	3.9	1.0	204
SEP.									
09...	1200	20	5.3	20	35	21	3.6	1.1	186

09403000 BRIGHT ANGEL CREEK NEAR GRAND CANYON, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS_ SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)
OCT.									
05...	0	9.0	5.1	.1	--	--	.03	.00	30
NOV.									
14...	0	12	5.1	.1	.00	.0	.00	.00	30
DEC.									
09...	0	12	6.8	.1	.40	.0	.08	.03	40
JAN.									
25...	0	13	6.2	.1	.20	.0	.04	.03	20
FEB.									
21...	0	17	6.5	.2	.00	.0	.01	.03	20
MAR.									
11...	0	19	5.8	.1	.00	.0	.01	.00	0
APR.									
09...	0	25	4.8	.1	.00	.0	.01	.03	20
MAY									
02...	0	7.8	2.3	.0	.30	.0	.06	.09	20
JUNE									
03...	0	8.5	2.3	.0	1.9	.0	.44	.15	20
JULY									
03...	6	11	4.4	.1	.00	.0	.00	.12	40
AUG.									
14...	0	9.4	4.0	.0	.10	.0	.02	.00	20
SEP.									
09...	11	8.4	4.2	.1	.18	.0	.04	.06	20

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.									
05...	204	202	.28	190	8	.1	363	8.2	16.0
NOV.									
14...	214	190	.29	180	3	.1	336	8.2	10.0
DEC.									
09...	222	209	.30	190	0	.2	366	8.2	3.0
JAN.									
25...	211	211	.29	190	2	.2	369	8.3	4.5
FEB.									
21...	222	209	.30	190	3	.2	380	8.2	6.5
MAR.									
11...	219	211	.30	210	35	.1	370	8.0	9.0
APR.									
09...	227	211	.31	200	21	.1	387	8.0	14.0
MAY									
02...	110	113	.15	110	9	.1	206	8.0	15.5
JUNE									
03...	124	118	.17	100	0	.1	201	8.1	14.0
JULY									
03...	177	173	.24	160	2	.1	309	8.4	22.0
AUG.									
14...	169	179	.23	170	0	.1	319	8.2	21.0
SEP.									
09...	170	182	.23	170	3	.1	313	8.7	19.0

09403780 KANAB CREEK NEAR FREDONIA, ARIZ.

LOCATION.--Lat 36°51'50", long 112°34'45", in SE¼ sec.14, T.40 N., R.3 W. (unsurveyed), Coconino County, at gaging station in Kaibab Indian Reservation, at Nagles Crossing, 0.2 mi (0.3 km) downstream from Johnson Wash, and 6.5 mi (10.5 km) southwest of Fredonia.

DRAINAGE AREA.--1,085 mi² (2,810 km²).

PERIOD OF RECORD.--Specific conductance: October 1967 to September 1973 (discontinued).
Water temperatures: October 1967 to September 1973 (discontinued).
Sediment records: October 1963 to September 1973 (discontinued).

EXTREMES.--1972-73:
Sediment concentrations: Maximum daily, 218,000 mg/l Apr. 14; minimum daily, no flow on many days.
Sediment discharge: Maximum daily, 223,000 tons Apr. 14; minimum daily, 0 tons on many days.

Period of record:
Sediment concentrations: Maximum daily, 233,000 mg/l Dec. 25, 1971; minimum daily, no flow on many days each year.
Sediment discharge: Maximum daily, 564,000 tons Sept. 19, 1972; minimum daily, 0 tons on many days each year.

REMARKS.--No flow for many days each year. Records of temperature and specific conductance on file at district office in Tucson, Ariz.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	3.0	1300	11
2	0	0	0	0	0	0	3.5	7000	66
3	0	0	0	0	0	0	8.0	5700	123
4	0	0	0	0	0	0	6.5	7100	125
5	25	88400	7940	.10	200	.05	10	12600	340
6	7.7	56800	980	.10	200	.05	1.0	2300	6.2
7	13	12100	425	0	0	0	.40	1500	1.6
8	.10	3500	.94	0	0	0	.40	2500	2.7
9	2.8	1900	14	0	0	0	.10	1500	.41
10	.90	500	1.2	0	0	0	0	0	0
11	0	0	0	.40	500	.54	.10	1000	.27
12	0	0	0	12	5000	162	.20	1500	.81
13	0	0	0	3.4	3000	28	.20	1500	.81
14	0	0	0	.20	500	.27	.20	1100	.59
15	49	43900	12000	1.0	1000	2.7	.20	700	.38
16	92	48400	14400	0	0	0	.20	500	.27
17	2.0	11000	59	3.4	4000	37	.20	1000	.54
18	22	29200	4170	.20	200	.11	.30	1500	1.2
19	169	95700	44900	.50	2000	2.7	.30	2000	1.6
20	149	72500	30500	5.0	3000	40	.30	1500	1.2
21	41	41800	4680	4.0	2000	22	.30	2700	2.2
22	5.0	15000	202	3.0	3700	30	.30	4600	3.7
23	1.0	1000	2.7	4.0	3300	36	.30	11000	8.9
24	5.0	10000	135	3.0	3100	25	.40	12500	14
25	3.0	7000	57	3.0	6000	49	.60	9000	15
26	0	0	0	3.0	3000	24	.50	9500	13
27	0	0	0	2.5	1990	13	.50	12500	17
28	0	0	0	2.0	1650	8.9	.50	12100	16
29	2.0	500	2.7	3.0	2600	21	.50	13000	18
30	0	0	0	4.0	10300	195	.50	3900	5.3
31	0	0	0	--	--	--	.50	2300	3.1
TOTAL	589.50	--	120469.54	57.80	--	697.32	40.00	--	799.78

09403780 KANAB CREEK NEAR FREDONIA, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.40	1500	1.6	1.0	437	1.2	10	1780	48
2	.30	6500	5.3	1.0	597	1.6	10	2340	63
3	.10	364	.10	1.0	479	1.3	10	1560	42
4	.20	500	.27	1.0	1710	4.6	10	1370	37
5	.30	661	.54	1.0	2030	5.5	10	3860	104
6	.50	845	1.1	1.0	834	2.3	10	2100	57
7	.50	374	.50	2.0	2470	13	10	2420	65
8	.50	461	.62	2.0	4390	24	8.0	2600	56
9	.50	578	.78	2.0	2040	11	6.0	2990	48
10	.50	566	.76	2.0	10300	56	5.0	1500	20
11	1.0	494	1.3	2.0	18900	102	4.0	1000	11
12	1.0	708	1.9	2.0	13000	70	4.0	5860	63
13	1.0	883	2.4	2.0	7190	39	4.0	7590	82
14	1.0	536	1.4	2.0	6000	32	4.0	8610	93
15	1.0	545	1.5	2.0	4460	24	4.0	5220	56
16	1.0	1660	4.5	2.0	7400	40	4.0	5620	61
17	1.0	710	1.9	2.0	8300	45	4.0	2700	29
18	1.0	389	1.1	2.0	5590	30	1.9	1600	8.2
19	1.0	493	1.3	2.0	3630	20	2.3	1000	6.2
20	1.0	1190	3.2	2.0	2780	15	1.5	4500	18
21	1.0	478	1.3	3.0	3880	31	10	9500	256
22	1.0	787	2.1	3.0	1550	13	10	8900	240
23	1.0	631	1.7	3.0	2170	18	15	9000	364
24	1.0	305	.82	3.0	2290	19	20	15500	837
25	1.0	343	.93	3.0	2290	19	25	18300	1240
26	1.0	599	1.6	7.0	1610	30	15	10500	425
27	1.0	600	1.6	10	2020	54	34	15000	1380
28	1.0	1100	3.0	10	2140	58	49	9400	1240
29	1.0	811	2.2	--	--	--	41	13700	1500
30	1.0	700	1.9	--	--	--	30	12300	996
31	1.0	500	1.4	--	--	--	25	12600	850
TOTAL	24.80	--	50.62	76.0	--	779.5	396.7	--	10295.4

09403780 KANAB CREEK NEAR FREDONIA, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	25	12000	810	10	20000	540	1.0	5000	14
2	24	12500	810	3.0	5000	40	.10	400	.11
3	13	5500	193	1.0	4500	12	0	0	0
4	17	7000	321	.80	14200	31	0	0	0
5	24	10300	667	1.5	6740	27	0	0	0
6	42	32000	3630	1.0	2000	5.4	0	0	0
7	113	120000	39100	.70	550	1.0	0	0	0
8	69	82000	15300	.60	500	.81	0	0	0
9	59	37000	5890	.10	400	.11	0	0	0
10	91	77500	19700	0	0	0	0	0	0
11	133	108000	41900	0	0	0	0	0	0
12	173	134000	72500	0	0	0	0	0	0
13	224	155000	111000	0	0	0	0	0	0
14	304	218000	223000	0	0	0	0	0	0
15	168	103000	58600	0	0	0	0	0	0
16	116	60700	21300	0	0	0	0	0	0
17	143	97000	47400	0	0	0	0	0	0
18	152	106000	47700	0	0	0	0	0	0
19	82	55800	12600	0	0	0	0	0	0
20	45	30000	3640	0	0	0	0	0	0
21	35	50000	4720	0	0	0	0	0	0
22	40	75000	8100	0	0	0	0	0	0
23	71	75000	14400	0	0	0	0	0	0
24	60	61000	9880	0	0	0	0	0	0
25	70	67000	12700	0	0	0	0	0	0
26	44	63000	7480	0	0	0	0	0	0
27	25	34000	2300	0	0	0	0	0	0
28	15	23000	932	0	0	0	0	0	0
29	10	16000	432	0	0	0	0	0	0
30	5.0	17000	230	0	0	0	0	0	0
31	--	--	--	1.3	7000	25	--	--	--
TOTAL	2392.0	--	787235	20.00	--	682.32	1.10	--	14.11

09403780 KANAB CREEK NEAR FREDONIA, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	.80	7250	16	0	0	0	0	0	0
13	.20	1570	.85	0	0	0	0	0	0
14	2.5	5000	34	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	3.6	8780	124	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	64	18600	5500	0	0	0
20	0	0	0	.40	10000	11	0	0	0
21	0	0	0	12	11700	594	0	0	0
22	0	0	0	.10	1500	.40	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	--	--	--
TOTAL	3.50	--	50.85	80.10	--	6229.40	0	--	0

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	3681.50
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	927303.84

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.
(Irrigation network station)

LOCATION (revised).--Lat 36°53'30", long 113°55'25", in SW¼SW¼ sec.4, T.40 N., R.15 W., Mohave County, at gaging station on right bank 0.5 mi (0.8 km) downstream from Beaver Dam Wash, 0.4 mi (0.6 km) upstream from Littlefield, and 36 mi (58 km) upstream from waterline of Lake Mead at elevation 1,221 ft (372.2 m) above mean sea level.

DRAINAGE AREA.--5,090 mi^2 (13,180 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: July 1949 to September 1973.
Water temperatures: October 1947 to September 1973.
Sediment records: October 1947 to September 1968.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.											
16...	1200	500	13	300	49	140	16	219	0	820	200
NOV.											
16...	1245	400	16	210	58	190	15	301	0	580	260
DEC.											
18...	1300	194	20	280	80	250	24	335	0	750	340
JAN.											
30...	1015	172	19	260	75	260	22	355	0	710	320
FEB.											
28...	1310	350	15	200	58	180	17	304	0	590	240
APR.											
04...	1200	344	17	230	66	170	16	308	0	680	220
30...	1200	1500	13	99	21	38	5.8	236	0	210	45
MAY											
11-13	--	2890	11	79	19	34	5.3	147	0	170	45
14-15	--	2600	12	430	26	44	7.1	103	0	1100	44
16-18	--	1840	12	120	18	34	4.8	128	0	270	43
JUNE											
19...	0930	263	20	170	47	140	13	273	0	440	190
AUG.											
01...	0920	62	21	350	110	250	19	300	0	1100	360
SEP.											
28...	0900	69	21	370	110	270	29	284	0	1100	380

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.--Continued

EXTREMES.--1972-73:
Specific conductance: Maximum daily, 3,710 micromhos Oct. 3; minimum daily, 685 micromhos May 12.
Water temperatures: Maximum, 30.0°C on several days during June and August; minimum, 4.0°C Dec. 10, Jan. 5.

Period of record:
Specific conductance (1949-73): Maximum daily, 4,650 micromhos Aug. 21, 1966; minimum daily, 685 micromhos May 12, 1973.
Water temperatures: Maximum, 33.5°C July 7, 1953; minimum, 1.5°C Jan. 4, 1949; Jan. 4, 1950.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.											
16...	.5	.44	.09	440	1650	2.24	950	770	2.0	2300	7.6
NOV.											
16...	.6	.55	.06	540	1480	2.01	760	520	3.0	2200	7.5
DEC.											
18...	.8	.56	.06	770	1910	2.60	1000	750	3.4	2680	7.7
JAN.											
30...	.7	.76	.09	710	1850	2.52	960	670	3.7	2650	7.8
FEB.											
28...	.7	.61	.09	520	1450	1.97	740	490	2.9	2050	7.2
APR.											
04...	.4	.91	.12	570	1560	2.12	850	590	2.5	2110	7.6
30...	.2	.25	.06	190	550	.75	330	140	.9	803	8.2
MAY											
11-13	--	--	--	--	436	.59	280	160	.9	697	8.3
14-15	--	--	--	--	1710	2.33	1200	1100	.6	1970	7.9
16-18	--	--	--	--	565	.77	370	270	.8	846	8.2
JUNE											
19...	.7	.29	.03	360	1160	1.58	620	390	2.5	1750	7.7
AUG.											
01...	1.1	.25	.06	1100	2360	3.21	1300	1100	3.0	3100	7.0
SEP.											
28...	1.0	.16	.18	1000	2420	3.29	1400	1100	3.2	3250	7.3

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
AUG.						
01...	0920	2400	7.5	22.5	23.5	7.5
SEP.						
28...	0900	3900	7.7	18.0	13.0	8.7

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3600	2750	2750	2800	2600	1400	2000	830	1030	2730	3400	3400
2	3500	2900	2750	2900	2650	1850	2150	900	1060	3020	3400	3400
3	3710	2950	2850	2800	2700	2000	2150	845	1080	2990	3400	3330
4	3490	3000	2900	2710	2520	2020	2200	735	1100	3100	3400	3400
5	2600	2900	2520	2800	2600	1960	2000	755	1340	3350	---	3120
6	3000	2900	2340	3150	2500	2140	2000	825	1340	3330	3500	3380
7	3200	2900	2800	3000	2300	1990	1750	790	1340	3370	3430	3350
8	1720	2850	2800	2950	1800	1910	1710	730	1550	---	3500	3400
9	2550	2900	2700	2900	2120	2150	1730	710	1550	3440	3500	3400
10	2500	2950	2750	2600	2300	2310	1720	730	1550	3390	3500	3400
11	2830	2650	2880	2580	2400	---	1200	770	1650	3410	3220	3400
12	3050	2700	2810	2680	1680	1460	1200	685	1650	3590	3490	3500
13	3000	2350	2850	2710	1980	1340	920	715	1670	---	3420	3300
14	3000	2500	2850	2700	2250	1630	915	1470	1730	3490	3300	3490
15	2950	2650	2800	2650	2550	2150	1220	2000	1500	3310	3400	3490
16	2150	2130	2780	2700	2550	2150	1210	900	1550	3350	3500	3450
17	2480	1750	2800	2350	2520	2070	1020	920	1570	3370	3400	3100
18	2750	1800	2700	2070	2520	2060	1010	830	1780	3420	3700	3400
19	2400	2400	2700	2400	2600	1920	1320	690	1980	3370	3700	3500
20	1900	2340	2700	2450	2600	1960	1320	690	1950	3480	3500	3450
21	2100	2490	2700	2620	2600	1750	1490	800	---	3470	3400	3400
22	2350	2700	2640	2850	2500	1760	1510	805	2100	3410	3230	3400
23	2570	2710	2720	2600	2550	1650	1550	835	2050	3400	3500	3400
24	2590	2710	2710	2710	2450	1650	1360	850	2500	3450	3580	3400
25	2750	2720	2750	2720	2500	1600	1010	860	2470	3470	3520	3400
26	2750	2680	2780	2680	2400	1600	965	890	2620	3460	3500	3400
27	2700	2650	2750	2600	2240	1690	900	895	2700	3470	3500	3450
28	2800	2600	2780	2700	1820	1510	900	985	3020	3470	3510	3350
29	2700	2700	2620	2700	---	1510	840	1010	2970	---	3520	3410
30	2550	2720	2620	2650	---	1760	785	1020	2750	3460	3130	3440
31	2700	---	2850	2650	---	1780	---	1020	---	3430	3100	---
MEAN	2740	2640	2740	2700	2390	1820	1400	905	1840	3360	3440	3390
YEAR	MAX	3710	MIN	685	MEAN	2440						

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	12.0	11.0	7.0	11.0	13.0	11.0	13.0	20.0	25.0	21.0	16.0
2	24.0	14.0	11.0	7.0	11.0	13.0	12.0	15.0	21.0	27.0	21.0	21.0
3	18.0	15.0	11.0	6.0	11.0	13.0	13.0	18.0	19.0	28.0	23.0	27.0
4	19.0	17.0	11.0	6.0	13.0	12.0	13.0	15.0	21.0	28.0	23.0	26.0
5	19.0	16.0	10.0	4.0	11.0	15.0	13.0	12.0	19.0	26.0	---	22.0
6	18.0	15.0	9.0	7.0	11.0	12.0	14.0	15.0	19.0	27.0	21.0	22.0
7	21.0	13.0	9.0	5.0	12.0	14.0	14.0	18.0	19.0	26.0	24.0	22.0
8	23.0	15.0	8.0	6.0	12.0	11.0	14.0	19.0	21.0	---	30.0	26.0
9	18.0	14.0	7.0	7.0	12.0	14.0	16.0	19.0	20.0	29.0	25.0	26.0
10	18.0	13.0	4.0	8.0	12.0	12.0	17.0	18.0	22.0	29.0	28.0	23.0
11	20.0	12.0	6.0	7.0	12.0	---	14.0	18.0	22.0	29.0	28.0	17.0
12	21.0	12.0	7.0	9.0	12.0	11.0	14.0	19.0	22.0	27.0	28.0	24.0
13	22.0	11.0	7.0	10.0	11.0	12.0	14.0	19.0	22.0	---	30.0	23.0
14	19.0	13.0	5.0	11.0	12.0	7.0	14.0	20.0	22.0	27.0	30.0	25.0
15	20.0	13.0	6.0	9.0	12.0	9.0	15.0	21.0	21.0	21.0	29.0	24.0
16	19.0	11.0	7.0	9.0	12.0	9.0	15.0	19.0	21.0	28.0	30.0	26.0
17	17.0	10.0	8.0	11.0	13.0	12.0	14.0	20.0	22.0	29.0	30.0	26.0
18	17.0	11.0	10.0	10.0	12.0	12.0	12.0	20.0	22.0	21.0	29.0	25.0
19	18.0	10.0	10.0	4.0	12.0	12.0	8.0	19.0	23.0	21.0	26.0	24.0
20	14.0	10.0	11.0	7.0	12.0	11.0	8.0	19.0	23.0	25.0	27.0	24.0
21	15.0	10.0	11.0	8.0	11.0	10.0	16.0	20.0	---	25.0	25.0	24.0
22	17.0	11.0	10.0	6.0	13.0	9.0	14.0	20.0	25.0	19.0	26.0	18.0
23	19.0	11.0	11.0	10.0	15.0	13.0	14.0	20.0	25.0	19.0	25.0	16.0
24	15.0	11.0	11.0	10.0	14.0	15.0	12.0	20.0	19.0	28.0	20.0	22.0
25	17.0	11.0	12.0	10.0	12.0	12.0	18.0	19.0	19.0	28.0	23.0	17.0
26	16.0	11.0	10.0	10.0	16.0	11.0	18.0	20.0	30.0	29.0	23.0	24.0
27	15.0	11.0	11.0	11.0	15.0	10.0	18.0	20.0	30.0	29.0	19.0	24.0
28	16.0	11.0	11.0	11.0	12.0	11.0	18.0	20.0	25.0	28.0	26.0	25.0
29	13.0	11.0	9.0	10.0	---	12.0	18.0	12.0	25.0	---	25.0	16.0
30	11.0	11.0	9.0	11.0	---	10.0	11.0	21.0	25.0	28.0	26.0	21.0
31	11.0	---	7.0	11.0	---	10.0	---	20.0	---	21.0	26.0	---
MEAN	17.5	12.0	9.0	8.5	12.5	11.5	14.0	18.5	22.0	26.0	25.5	22.5

YEAR MAX 30.0 MIN 4.0 MEAN 16.5

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.

LOCATION.--Lat 36°00'58", long 114°44'13", in NE¼SW¼ sec.3, T.30 N., R.23 W., Gila and Salt River meridian, on State line between Mohave County, Ariz., and Clark County, Nev., at gaging station in center of Hoover Dam on Colorado River.

DRAINAGE AREA.--167,800 mi² (434,600 km²), approximately.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DEPTH (FT)	ELEVATION ABOVE MEAN SEA LEVEL (FT)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.										
04...	.0	1159	--	--	--	--	--	127	0	--
04...	10	1149	7.4	79	32	110	5.0	127	0	320
04...	25	1134	--	--	--	--	--	127	0	--
04...	75	1084	7.4	83	31	110	4.0	150	0	300
04...	125	1034	--	--	--	--	--	159	0	--
04...	175	984	--	--	--	--	--	160	0	--
04...	225	934	7.6	87	30	100	4.0	161	0	300
04...	250	909	7.8	87	30	100	4.0	161	0	300
04...	275	884	8.0	86	30	100	4.0	161	0	290
04...	325	834	--	--	--	--	--	161	0	--
04...	375	784	8.0	86	30	100	4.0	161	0	290
04...	435	724	--	--	--	--	--	162	0	--
30...	.0	1162	7.4	82	31	110	5.0	142	0	320
30...	10	1152	--	--	--	--	--	140	0	--
30...	25	1137	--	--	--	--	--	140	0	--
30...	75	1087	--	--	--	--	--	140	0	--
30...	125	1037	7.4	83	31	100	5.0	146	0	310
30...	175	987	7.6	88	31	110	5.0	160	0	310
30...	225	937	7.6	87	30	100	5.0	160	0	300
30...	255	907	7.6	87	30	100	5.0	161	0	300
30...	275	887	--	--	--	--	--	161	0	--
30...	325	837	--	--	--	--	--	161	0	--
30...	375	787	8.2	87	30	100	5.0	162	0	300
30...	435	727	--	--	--	--	--	162	0	--
DEC.										
05...	.0	1164	8.7	84	32	110	5.0	149	0	310
05...	10	1154	--	--	--	--	--	--	--	--
05...	25	1139	--	--	--	--	--	--	--	--
05...	75	1089	--	--	--	--	--	--	--	--
05...	125	1039	9.5	84	32	110	4.0	148	0	320
05...	175	989	9.2	88	32	110	4.0	161	0	310
05...	225	939	8.7	86	32	100	4.0	161	0	300
05...	260	904	9.0	86	30	100	5.0	162	0	290
05...	275	889	9.1	--	--	--	--	--	--	--
05...	325	839	--	--	--	--	--	--	--	--
05...	375	789	8.0	85	32	110	5.0	149	0	320
05...	425	739	10	86	31	100	5.0	165	0	290
05...	440	724	--	--	--	--	--	--	--	--
29...	.0	1168	9.0	86	31	100	4.0	150	0	300
29...	10	1158	--	--	--	--	--	150	0	--
29...	25	1143	--	--	--	--	--	150	0	--
29...	75	1093	--	--	--	--	--	150	0	--
29...	125	1043	--	--	--	--	--	150	0	--
29...	175	993	8.6	87	30	100	4.0	151	0	300
29...	225	943	8.8	87	30	100	4.0	159	0	300
29...	260	908	8.6	87	28	97	4.0	163	0	290
29...	275	893	8.6	87	28	97	4.0	163	0	280
29...	325	843	--	--	--	--	--	163	0	--
29...	375	793	--	--	--	--	--	163	0	--
29...	425	743	9.6	87	29	97	4.0	163	1	280
29...	440	728	--	--	--	--	--	167	0	--
JAN.										
29...	.0	1173	8.9	86	30	100	5.0	150	0	300
29...	10	1163	--	--	--	--	--	151	0	--
29...	25	1148	--	--	--	--	--	151	0	--
29...	75	1098	--	--	--	--	--	154	0	--
29...	125	1048	--	--	--	--	--	153	0	--
29...	175	998	8.5	85	31	100	5.0	153	0	300
29...	225	948	8.9	85	31	100	5.0	149	1	300
29...	260	913	--	--	--	--	--	153	0	--
29...	275	898	8.9	85	30	100	5.0	154	0	300
29...	325	848	9.5	86	30	96	5.0	160	0	290
29...	375	798	--	--	--	--	--	160	0	--
29...	425	748	9.7	87	20	100	5.0	159	1	290
29...	445	728	--	--	--	--	--	162	0	--

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1940 to September 1973.

REMARKS.--Samples collected by Bureau of Reclamation and analyzed by the Metropolitan Water District of Southern California, LaVerne, Calif.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.										
04...	97	--	--	--	--	--	--	1140	8.3	24.5
04...	100	.10	716	.97	330	230	2.6	1140	8.3	24.5
04...	98	--	--	--	--	--	--	1130	8.3	24.5
04...	93	1.3	704	.96	340	210	2.6	1110	7.7	21.5
04...	92	--	--	--	--	--	--	1140	7.7	16.5
04...	92	--	--	--	--	--	--	1120	7.9	13.5
04...	89	1.9	699	.95	340	210	2.4	1100	7.9	12.0
04...	89	1.9	699	.95	340	210	2.4	1100	7.9	12.0
04...	89	1.7	688	.94	340	210	2.4	1090	8.0	12.0
04...	88	--	--	--	--	--	--	1090	8.0	11.5
04...	89	2.0	688	.94	340	210	2.4	1090	8.1	11.5
04...	88	--	--	--	--	--	--	1090	7.9	11.5
30...	94	.70	720	.98	330	220	2.6	1120	7.7	20.5
30...	94	--	--	--	--	--	--	1120	7.9	20.5
30...	94	--	--	--	--	--	--	1120	7.9	20.5
30...	94	--	--	--	--	--	--	1120	7.9	20.5
30...	93	1.0	702	.95	340	220	2.4	1120	7.6	19.5
30...	94	1.7	726	.99	350	220	2.6	1130	7.8	13.5
30...	86	1.7	696	.95	340	210	2.4	1100	7.9	12.0
30...	86	1.7	697	.95	340	210	2.4	1100	7.8	11.5
30...	86	--	--	--	--	--	--	1100	8.0	11.5
30...	86	--	--	--	--	--	--	1100	7.9	11.5
30...	87	1.3	690	.95	340	210	2.4	1100	7.7	11.5
30...	87	--	--	--	--	--	--	1100	7.7	11.5
DEC.										
05...	92	1.2	716	.97	340	220	2.6	1140	7.9	16.0
05...	92	--	--	--	--	--	--	1140	7.0	16.5
05...	94	--	--	--	--	--	--	1140	7.9	16.5
05...	94	--	--	--	--	--	--	1140	7.9	16.5
05...	94	1.3	728	.99	340	220	2.6	1140	7.9	16.5
05...	91	1.8	725	.99	350	220	2.6	1110	8.2	14.5
05...	87	1.8	699	.95	350	210	2.3	1100	7.9	13.0
05...	86	1.7	680	.94	340	210	2.4	1080	8.0	12.0
05...	86	1.7	--	--	--	--	--	1080	7.9	12.0
05...	93	--	--	--	--	--	--	1140	7.9	11.5
05...	94	1.2	729	.99	340	220	2.6	1140	7.9	11.5
05...	86	1.8	691	.94	340	210	2.4	1100	7.7	11.5
05...	87	--	--	--	--	--	--	1100	7.6	11.5
29...	92	1.6	697	.95	340	220	2.4	1140	8.2	13.5
29...	93	--	--	--	--	--	--	1140	8.1	13.5
29...	93	--	--	--	--	--	--	1140	7.8	13.5
29...	93	--	--	--	--	--	--	1140	7.8	13.5
29...	93	--	--	--	--	--	--	1140	7.8	13.5
29...	93	1.1	698	.95	340	220	2.4	1140	7.7	13.5
29...	91	1.7	701	.95	340	210	2.4	1110	8.0	12.5
29...	84	1.6	680	.92	330	200	2.3	1080	8.1	12.0
29...	84	2.0	671	.91	330	200	2.3	1080	7.6	11.5
29...	85	--	--	--	--	--	--	1080	8.0	11.5
29...	85	--	--	--	--	--	--	1100	7.9	11.5
29...	86	1.3	675	.92	340	200	2.3	1100	8.3	11.0
29...	87	--	--	--	--	--	--	1100	7.6	11.0
JAN.										
29...	90	1.2	695	.95	340	220	2.4	1110	7.9	12.0
29...	89	--	--	--	--	--	--	1110	8.1	12.0
29...	89	--	--	--	--	--	--	1120	8.0	12.0
29...	89	--	--	--	--	--	--	1120	8.2	12.0
29...	88	--	--	--	--	--	--	1120	8.0	12.0
29...	88	1.2	694	.94	340	210	2.4	1120	8.0	11.5
29...	90	1.5	696	.95	340	220	2.4	1110	8.4	11.5
29...	88	--	--	--	--	--	--	1120	8.2	11.5
29...	88	1.4	694	.94	340	210	2.4	1120	7.9	11.5
29...	85	1.8	682	.93	340	210	2.3	1090	8.0	11.5
29...	85	--	--	--	--	--	--	1090	7.9	11.0
29...	86	1.7	689	.94	340	210	2.4	1090	8.3	11.0
29...	85	--	--	--	--	--	--	1090	7.6	11.0

COLORADO RIVER MAIN STEM

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1972--Continued

DATE	DEPTH (FT)	ELEVATION ABOVE MEAN SEA LEVEL (FT)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
FEB.										
27...	.0	1175	8.0	86	31	100	4.0	155	0	300
27...	10	1165	--	--	--	--	--	155	0	--
27...	25	1150	--	--	--	--	--	155	0	--
27...	75	1100	8.9	--	--	--	--	155	0	--
27...	125	1050	--	--	--	--	--	155	0	--
27...	175	1000	--	--	--	--	--	155	0	--
27...	225	950	8.0	86	31	100	4.0	155	0	300
27...	264	911	8.0	86	31	100	4.0	155	0	300
27...	275	900	8.0	86	31	100	4.0	155	0	300
27...	325	850	--	--	--	--	--	156	0	--
27...	375	800	8.0	85	30	100	4.0	156	0	300
27...	425	750	--	--	--	--	--	157	0	--
27...	440	735	--	--	--	--	--	157	0	--
MAR.										
29...	.0	1178	8.2	86	30	100	5.0	154	0	300
29...	10	1168	--	--	--	--	--	155	0	--
29...	25	1153	--	--	--	--	--	155	0	--
29...	75	1103	--	--	--	--	--	155	0	--
29...	125	1053	--	--	--	--	--	155	0	--
29...	175	1003	--	--	--	--	--	155	0	--
29...	225	953	8.4	86	30	100	5.0	155	0	300
29...	267	911	8.5	86	30	100	5.0	155	0	290
29...	275	903	--	--	--	--	--	156	0	--
29...	325	853	8.5	85	29	98	5.0	156	0	290
29...	373	805	--	--	--	--	--	157	0	--
29...	430	748	8.7	85	29	97	4.0	157	0	290
29...	445	733	--	--	--	--	--	157	0	--
APR.										
26...	5.0	1180	9.0	86	30	100	4.0	156	0	310
26...	10	1175	--	--	--	--	--	156	0	--
26...	25	1160	--	--	--	--	--	156	0	--
26...	75	1110	--	--	--	--	--	156	0	--
26...	125	1060	--	--	--	--	--	155	0	--
26...	175	1010	8.7	86	30	100	4.0	155	0	300
26...	225	960	--	--	--	--	--	155	0	--
26...	275	910	--	--	--	--	--	157	0	--
26...	285	900	9.0	85	30	100	4.0	156	0	290
26...	325	860	9.0	84	30	99	4.0	156	0	290
26...	375	810	--	--	--	--	--	157	0	--
26...	425	760	9.4	84	30	99	4.0	157	0	290
MAY										
30...	.0	1186	8.2	88	30	100	4.0	159	0	310
30...	10	1176	--	--	--	--	--	159	0	--
30...	25	1161	--	--	--	--	--	159	0	--
30...	75	1111	--	--	--	--	--	157	0	--
30...	125	1061	9.0	87	30	100	4.0	157	0	300
30...	175	1011	--	--	--	--	--	157	0	--
30...	225	961	9.4	86	30	100	4.0	157	0	300
30...	275	911	--	--	--	--	--	157	0	--
30...	285	901	9.0	86	30	100	4.0	159	0	290
30...	325	861	--	--	--	--	--	159	0	--
30...	375	811	--	--	--	--	--	159	0	--
30...	425	761	9.2	85	29	100	4.0	159	0	290
30...	460	726	--	--	--	--	--	159	0	--
JUNE										
28...	.0	1186	8.2	82	30	100	4.0	143	0	300
28...	10	1176	--	--	--	--	--	143	0	--
28...	25	1161	--	--	--	--	--	155	0	--
28...	75	1111	--	--	--	--	--	156	0	--
28...	125	1061	--	--	--	--	--	156	0	--
28...	175	1011	8.5	86	30	100	4.0	156	0	300
28...	225	961	--	--	--	--	--	157	0	--
28...	275	911	8.9	85	30	100	4.0	159	0	290
28...	285	901	8.5	85	30	100	4.0	159	0	290
28...	325	861	--	--	--	--	--	159	0	--
28...	375	811	--	--	--	--	--	154	2	--
28...	425	761	9.2	85	29	100	4.0	160	0	290

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
FEB.										
27...	91	1.2	698	.95	340	220	2.4	1100	8.1	13.5
27...	91	--	--	--	--	--	--	1110	8.2	13.0
27...	90	--	--	--	--	--	--	1110	8.2	12.0
27...	90	1.6	--	--	--	--	--	1110	8.1	12.0
27...	90	--	--	--	--	--	--	1110	8.1	12.0
27...	90	--	--	--	--	--	--	1120	8.1	11.5
27...	90	1.5	697	.95	340	220	2.4	1120	8.1	11.5
27...	90	1.5	697	.95	340	220	2.4	1130	8.1	11.5
27...	90	1.6	697	.95	340	220	2.4	1120	8.1	11.5
27...	89	--	--	--	--	--	--	1100	8.1	11.5
27...	86	1.7	692	.94	340	210	2.4	1100	8.1	11.0
27...	85	--	--	--	--	--	--	1080	8.1	11.0
27...	85	--	--	--	--	--	--	1070	8.1	11.0
MAR.										
29...	88	1.3	694	.94	340	210	2.4	1100	8.2	13.0
29...	88	--	--	--	--	--	--	1100	8.3	13.0
29...	89	--	--	--	--	--	--	1100	8.2	13.0
29...	89	--	--	--	--	--	--	1100	8.2	13.0
29...	89	--	--	--	--	--	--	1100	8.2	12.5
29...	88	--	--	--	--	--	--	1100	8.2	12.0
29...	89	1.6	696	.95	340	210	2.4	1100	8.1	12.0
29...	88	1.7	686	.93	340	210	2.4	1100	8.1	12.0
29...	87	--	--	--	--	--	--	1090	8.1	12.0
29...	85	1.7	679	.92	330	200	2.3	1080	8.1	11.5
29...	85	--	--	--	--	--	--	1070	8.1	11.5
29...	84	1.7	677	.92	330	200	2.3	1070	8.1	11.5
29...	84	--	--	--	--	--	--	1070	8.0	11.0
APR.										
26...	91	1.0	708	.96	340	210	2.4	1110	8.1	19.5
26...	90	--	--	--	--	--	--	1110	8.1	19.0
26...	89	--	--	--	--	--	--	1110	8.0	17.0
26...	88	--	--	--	--	--	--	1110	8.0	13.5
26...	88	--	--	--	--	--	--	1110	8.1	13.0
26...	87	1.4	693	.94	340	210	2.4	1110	7.9	12.0
26...	86	--	--	--	--	--	--	1100	8.0	12.0
26...	86	--	--	--	--	--	--	1100	8.0	11.5
26...	84	1.6	680	.92	340	210	2.4	1100	8.1	11.5
26...	84	1.5	678	.92	330	210	2.4	1090	8.0	11.5
26...	84	--	--	--	--	--	--	1090	8.0	11.5
26...	84	1.6	679	.92	330	210	2.4	1090	7.9	11.5
MAY										
30...	88	1.1	708	.96	340	210	2.3	1110	7.7	25.5
30...	88	--	--	--	--	--	--	1120	7.7	25.5
30...	88	--	--	--	--	--	--	1120	7.7	23.0
30...	88	--	--	--	--	--	--	1100	8.0	15.0
30...	88	1.6	697	.95	340	210	2.4	1100	7.6	13.5
30...	87	--	--	--	--	--	--	1100	8.1	13.0
30...	88	1.2	696	.95	340	210	2.4	1100	8.0	12.5
30...	86	--	--	--	--	--	--	1100	7.5	12.0
30...	87	1.2	686	.93	340	210	2.4	1090	7.5	12.0
30...	85	--	--	--	--	--	--	1080	7.5	12.0
30...	85	--	--	--	--	--	--	1080	7.4	11.5
30...	84	1.2	681	.93	330	200	2.4	1080	7.5	11.5
30...	83	--	--	--	--	--	--	1080	7.5	11.5
JUNE										
28...	88	.40	683	.93	330	210	2.4	1100	7.7	29.0
28...	88	--	--	--	--	--	--	1100	8.2	29.0
28...	87	--	--	--	--	--	--	1100	7.7	26.5
28...	88	--	--	--	--	--	--	1100	7.6	15.5
28...	87	--	--	--	--	--	--	1100	7.6	14.0
28...	87	1.4	694	.94	340	210	2.4	1100	7.8	13.0
28...	87	--	--	--	--	--	--	1100	8.2	13.0
28...	86	1.8	684	.93	340	210	2.4	1090	7.8	12.0
28...	86	1.7	684	.93	340	210	2.4	1090	8.1	12.0
28...	85	--	--	--	--	--	--	1090	7.9	11.5
28...	84	--	--	--	--	--	--	1080	8.4	12.0
28...	84	1.8	682	.93	330	200	2.4	1080	7.8	12.0

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	DEPTH (FT)	ELEVATION ABOVE MEAN SEA LEVEL (FT)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CALCIUM (CA) (MG/L)	DIS-SOLVED MAGNESIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
JULY										
31...	.0	1185	8.5	79	30	100	4.0	132	0	310
31...	10	1175	--	--	--	--	--	133	0	--
31...	25	1160	--	--	--	--	--	134	0	--
31...	75	1110	--	--	--	--	--	159	0	--
31...	125	1060	8.7	86	30	100	4.0	157	0	300
31...	175	1010	--	--	--	--	--	156	0	--
31...	225	960	8.9	86	30	100	4.0	157	0	300
31...	275	910	--	--	--	--	--	159	0	--
31...	285	900	8.9	86	28	100	4.0	159	0	290
31...	325	860	--	--	--	--	--	159	0	--
31...	375	810	--	--	--	--	--	160	0	--
31...	425	760	9.0	86	28	100	4.0	160	0	290
31...	460	725	--	--	--	--	--	160	0	--
AUG.										
29...	.0	1183	8.0	78	30	100	5.0	124	1	310
29...	10	1173	--	--	--	--	--	128	0	--
29...	25	1158	8.2	78	31	100	5.0	127	0	320
29...	75	1108	8.0	86	30	100	5.0	157	0	290
29...	125	1058	--	--	--	--	--	157	0	--
29...	175	1008	8.5	86	30	99	5.0	157	0	300
29...	225	958	8.7	85	28	98	4.0	159	0	290
29...	275	908	--	--	--	--	--	159	0	--
29...	285	898	8.7	85	29	98	4.0	159	0	290
29...	325	858	--	--	--	--	--	159	0	--
29...	395	788	--	--	--	--	--	160	0	--
29...	425	758	9.3	85	28	98	4.0	159	0	290
29...	460	723	--	--	--	--	--	160	0	--
SEP.										
27...	.0	1180	7.8	81	30	100	4.0	128	0	310
27...	10	1170	--	--	--	--	--	129	0	--
27...	25	1155	--	--	--	--	--	129	0	--
27...	75	1105	8.0	87	30	98	4.0	155	0	300
27...	125	1055	--	--	--	--	--	156	0	--
27...	175	1005	8.5	88	29	100	4.0	156	0	290
27...	225	955	8.5	85	29	94	4.0	159	0	270
27...	275	905	--	--	--	--	--	160	0	--
27...	285	895	8.7	85	28	94	4.0	159	0	280
27...	325	855	--	--	--	--	--	159	0	--
27...	375	805	--	--	--	--	--	160	0	--
27...	425	755	8.9	85	29	95	4.0	160	0	280
27...	460	720	--	--	--	--	--	160	0	--

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS. SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
JULY										
31...	88	.00	685	.93	320	210	2.4	1080	7.4	27.0
31...	89	--	--	--	--	--	--	1080	7.6	27.0
31...	88	--	--	--	--	--	--	1090	7.9	26.5
31...	86	--	--	--	--	--	--	1100	7.6	18.5
31...	87	1.0	694	.94	340	210	2.4	1100	8.0	14.0
31...	88	--	--	--	--	--	--	1100	7.7	13.5
31...	86	1.2	693	.94	340	210	2.4	1100	7.6	13.0
31...	84	--	--	--	--	--	--	1090	7.6	12.0
31...	84	1.3	681	.93	330	200	2.4	1090	8.1	12.0
31...	84	--	--	--	--	--	--	1090	7.9	12.0
31...	84	--	--	--	--	--	--	1090	7.5	12.0
31...	84	1.4	681	.93	330	200	2.4	1090	7.6	12.0
31...	84	--	--	--	--	--	--	1080	7.8	12.0
AUG.										
29...	92	.00	685	.93	320	220	2.4	1090	8.3	28.0
29...	91	--	--	--	--	--	--	1090	8.3	28.0
29...	90	.00	695	.95	320	220	2.4	1090	8.3	28.0
29...	88	1.6	686	.93	340	210	2.4	1100	8.1	18.5
29...	88	--	--	--	--	--	--	1100	8.1	14.5
29...	87	1.5	694	.94	340	210	2.3	1090	8.1	13.0
29...	84	1.2	677	.92	330	200	2.4	1060	8.0	13.0
29...	84	--	--	--	--	--	--	1060	8.1	12.0
29...	83	1.2	677	.92	330	200	2.3	1060	8.1	12.0
29...	84	--	--	--	--	--	--	1060	8.1	12.0
29...	84	--	--	--	--	--	--	1060	8.0	12.0
29...	84	1.3	678	.92	330	200	2.4	1060	8.0	12.0
29...	84	--	--	--	--	--	--	1060	8.0	12.0
SEP.										
27...	88	.30	684	.93	330	220	2.4	1110	8.1	24.5
27...	90	--	--	--	--	--	--	1110	8.2	24.5
27...	91	--	--	--	--	--	--	1110	8.2	24.5
27...	88	1.8	693	.94	340	210	2.3	1110	7.7	19.0
27...	89	--	--	--	--	--	--	1110	7.8	15.0
27...	89	1.6	687	.93	340	210	2.4	1110	8.2	14.0
27...	86	1.8	657	.89	330	200	2.2	1080	8.2	13.0
27...	84	--	--	--	--	--	--	1070	7.8	12.0
27...	84	1.7	664	.90	330	200	2.3	1070	8.2	12.0
27...	83	--	--	--	--	--	--	1070	8.0	12.0
27...	85	--	--	--	--	--	--	1070	8.0	12.0
27...	85	1.6	667	.91	330	200	2.3	1090	8.0	12.0
27...	85	--	--	--	--	--	--	1090	7.8	12.0

09421500 COLORADO RIVER BELOW HOOVER DAM, ARIZ.-NEV.
(Irrigation network station)

LOCATION.--Lat 36°00'55", long 114°44'16", in NE¼SW¼ sec.3, T.30 N., R.23 W., Gila and Salt River meridian, Mohave County, Ariz., or in SW¼NE¼ sec.29, T.22 S., R.65 E., Mount Diablo meridian, Clark County, Nev., 0.3 mi (0.5 km) downstream from gaging station in powerhouse at downstream side of Hoover Dam.

DRAINAGE AREA.--167,800 mi² (434,600 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1939 to September 1973.
Water temperatures: October 1941 to September 1965.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
17...	1100	16420	9.4	10	88	29	91	4.8	164
NOV.									
29...	1545	6240	9.5	20	90	30	100	4.7	170
JAN.									
16...	0915	15450	9.2	9	85	31	110	5.2	161
FEB.									
27...	1550	8040	9.4	9	85	29	110	6.1	168
MAR.									
22...	1355	13590	9.6	9	86	28	110	5.1	161
APR.									
17...	1130	16250	9.2	9	86	29	100	4.7	165
JUNE									
18...	1515	21320	9.3	9	81	29	100	4.9	163
JULY									
24...	1010	19920	9.4	10	86	29	110	5.0	160
AUG.									
21...	1305	21020	9.4	10	86	29	100	5.2	131
SEP.									
18...	1045	18070	9.3	10	85	29	100	5.6	166

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DIS. SOLVED NITRATE (NO3) (MG/L)	DIS. SOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)	DISSOLVED BORON (B) (UG/L)
OCT.									
17...	0	300	86	.4	--	--	.63	.00	150
NOV.									
29...	0	310	95	.4	2.7	.0	.62	.00	140
JAN.									
16...	0	310	92	.6	2.3	.0	.52	.03	150
FEB.									
27...	0	330	97	.6	2.2	.0	.49	.09	160
MAR.									
22...	0	300	92	.4	2.3	.0	.51	.03	120
APR.									
17...	0	300	87	.1	2.3	.0	.52	.06	130
JUNE									
18...	0	300	89	.4	1.9	.0	.43	.06	120
JULY									
24...	0	300	85	.4	2.0	.0	.47	.03	150
AUG.									
21...	0	320	90	.2	2.7	.0	.60	.00	140
SEP.									
18...	0	300	88	.3	1.9	.0	.43	.03	150

09421500 COLORADO RIVER BELOW HOOVER DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICPOMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 17...	756	692	1.03	340	200	2.2	1130	7.8	12.0
NOV. 29...	772	729	1.05	350	210	2.3	1090	7.4	12.0
JAN. 16...	792	727	1.08	340	210	2.6	1110	8.3	12.0
FEB. 27...	748	755	1.02	330	190	2.6	1140	7.7	12.0
MAR. 22...	775	715	1.05	330	200	2.6	1130	7.9	--
APR. 17...	742	702	1.01	330	200	2.4	1100	7.9	11.5
JUNE 18...	725	698	.99	320	190	2.4	1080	6.7	21.0
JULY 24...	728	706	.99	330	200	2.6	1080	7.9	11.5
AUG. 21...	743	707	1.01	330	230	2.4	1080	8.0	11.0
SEP. 18...	718	701	.98	330	200	2.4	1100	7.9	12.0

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
OCT. 17...	1100	16400	1120	7.7	12.0	22.5	6.4
JAN. 16...	0915	15400	1200	7.9	12.0	9.0	9.3
APR. 17...	1130	16200	1120	7.6	11.5	23.0	8.5
JULY 24...	1010	19900	1280	7.8	11.5	35.0	8.7

09423000 COLORADO RIVER BELOW DAVIS DAM, ARIZ.-NEV.

LOCATION.--Lat 35°11'30", long 114°34'17", in SE¼NE¼ sec.1, T.32 S., R.66 E., Mount Diablo meridian, in Nevada, Clark County, at gaging station on right bank 0.5 mi (0.8 km) downstream from Davis Dam, 29 mi (47 km) west of Kingman, Ariz., and 68 mi (109 km) downstream from Hoover Dam.

DRAINAGE AREA.--169,300 mi^2 (438,500 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1973.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)
OCT.									
02...	1155	14900	8.5	20	85	30	100	4.6	150
16...	1500	5120	9.3	10	94	30	100	5.1	158
NOV.									
01...	1710	9630	8.6	20	83	31	110	5.1	150
DEC.									
01...	1545	8410	9.0	20	88	32	110	4.6	154
JAN.									
02...	1225	9650	8.9	9	85	29	110	5.2	160
FEB.									
01...	0750	8320	9.1	20	86	31	110	5.0	161
MAR.									
01...	1430	14890	8.8	20	86	30	110	4.9	166
APR.									
02...	1420	19780	8.2	9	87	30	110	5.0	159
MAY									
01...	1600	19270	8.5	20	85	30	100	5.0	161
JUNE									
14...	1050	18980	8.7	9	86	30	100	4.6	159
JULY									
02...	1215	24570	9.0	10	85	29	100	5.0	154
AUG.									
01...	1420	23750	9.1	290	83	30	110	4.4	149
SEP.									
04...	1500	19960	9.0	10	79	29	110	5.4	146

09423000 COLORADO RIVER BELOW DAVIS DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DIS_SOLVED NITRATE (NO3) (MG/L)	DIS_SOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT.									
02...	0	310	93	.4	--	--	.35	180	796
16...	0	310	90	.4	--	--	.47	150	772
NOV.									
01...	0	310	92	.4	1.2	.0	.28	150	812
DEC.									
01...	0	310	98	.4	1.3	.0	.30	150	764
JAN.									
02...	0	320	100	.3	1.7	.0	.38	170	872
FEB.									
01...	0	310	96	.4	1.5	.0	.33	150	780
MAR.									
01...	0	320	95	.6	1.6	.0	.37	160	780
APR.									
02...	[illegible]	310	93	.3	1.5	.0	.33	60	810
MAY									
01...	0	300	91	.4	.40	.0	.10	140	738
JUNE									
14...	0	290	89	.4	1.6	.0	.37	140	744
JULY									
02...	0	300	93	.4	1.2	.0	.27	140	768
AUG.									
01...	0	300	92	.5	.60	.0	.15	140	752
SEP.									
04...	0	320	97	.3	2.0	.0	.46	150	726

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT.								
02...	707	1.08	340	210	2.4	1130	7.9	19.0
16...	719	1.05	360	230	2.3	1100	7.7	15.5
NOV.								
01...	716	1.10	330	210	2.6	1140	7.8	16.0
DEC.								
01...	731	1.04	350	230	2.6	1130	7.7	14.0
JAN.								
02...	741	1.19	330	200	2.6	1140	7.9	9.5
FEB.								
01...	730	1.06	340	210	2.6	1140	8.3	8.5
MAR.								
01...	741	1.06	340	200	2.6	1130	8.2	--
APR.								
02...	725	1.10	340	210	2.6	1130	8.2	13.0
MAY								
01...	700	1.00	340	200	2.4	1110	7.4	13.0
JUNE								
14...	690	1.01	340	210	2.4	1100	8.0	15.5
JULY								
02...	699	1.04	330	210	2.4	1110	7.9	20.0
AUG.								
01...	704	1.02	330	210	2.6	1090	7.9	20.5
SEP.								
04...	724	.99	320	200	2.7	1100	8.2	20.0

09424000 COLORADO RIVER NEAR TOPOCK, ARIZ.

LOCATION.--Lat 34°41'15", long 114°27'43", in SW¼NW¼ sec.13, T.15 N., R.21 W., Mohave County, at gaging station on left bank in Mohave Canyon, 2.7 mi (4.3 km) downstream from Topock, 39.5 mi (63.6 km) upstream from Parker Dam, and 49 mi (79 km) downstream from Davis Dam.

DRAINAGE AREA.--172,300 mi² (446,300 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: August 1969 to September 1973.
Water temperatures: July 1952 to July 1962.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	0900	11210	8.1	10	82	30	110	4.7	148
NOV.									
01...	0920	8790	8.4	30	82	32	110	5.1	149
DEC.									
01...	1210	8500	8.8	20	86	31	110	4.7	154
JAN.									
04...	1130	10480	8.8	9	85	32	100	4.7	157
FEB.									
01...	1250	10180	8.8	50	86	30	110	5.1	159
MAR.									
01...	1220	10460	8.6	9	86	30	110	4.8	167
APR.									
02...	1015	9240	8.0	9	87	31	120	5.2	159
MAY									
01...	0915	14900	8.5	9	85	30	110	4.8	160
JUNE									
14...	1050	14250	8.7	9	84	29	100	4.8	163
JULY									
03...	1200	17370	9.1	10	85	29	100	5.0	153
AUG.									
01...	1100	17540	9.7	20	85	30	110	4.5	153
SEP.									
04...	1130	--	9.0	0	81	30	110	5.3	152

09424000 COLORADO RIVER NEAR TOPOCK, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS_ SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT. 02...	0	300	93	.5	--	--	.2[illegible]	180	730
NOV. 01...	0	320	100	.3	1.1	.0	.24	140	712
DEC. 01...	0	320	99	.3	1.3	.0	.29	160	724
JAN. 04...	0	31[illegible]	93	.3	1.3	.0	.29	140	--
FEB. 01...	0	310	96	.4	1.3	.0	.30	130	724
MAR. 01...	0	320	94	.4	1.6	.0	.37	160	718
APR. 02...	0	330	93	.3	1.4	.0	.32	170	718
MAY 01...	0	300	90	.4	.40	.0	.09	140	698
JUNE 14...	0	290	90	.4	1.8	.0	.42	130	660
JULY 03...	0	310	92	.4	1.2	.0	.29	140	694
AUG. 01...	0	290	91	.5	1.2	.0	.27	150	692
SEP. 04...	0	290	91	.3	.80	.0	.18	170	--

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 02...	702	.99	330	210	2.6	1140	8.0	--
NOV. 01...	733	.97	340	210	2.6	1130	7.8	--
DEC. 01...	738	.98	340	220	2.6	1120	7.6	13.0
JAN. 04...	714	.97	340	220	2.3	1130	8.2	9.5
FEB. 01...	727	.98	340	210	2.6	1120	8.3	9.0
MAR. 01...	740	.98	340	200	2.6	1140	8.2	--
APR. 02...	756	.98	350	210	2.8	1120	8.3	--
MAY 01...	709	.95	340	200	2.6	1110	8.0	14.0
JUNE 14...	691	.90	330	200	2.4	1100	7.5	16.0
JULY 03...	707	.94	330	210	2.4	1110	7.9	--
AUG. 01...	698	.94	340	210	2.6	1090	7.5	19.0
SEP. 04...	693	.94	330	200	2.7	1110	8.1	20.0

09427520 COLORADO RIVER BELOW PARKER DAM, ARIZ.-CALIF.

LOCATION.--Lat 34°17'44", long 114°08'22", in NW¼NW¼ sec.3, T.2 N., R.27 E., San Bernardino meridian, in California, San Bernardino County, at gaging station, at Parker Dam, 13 mi (21 km) northeast of Parker, Ariz., and 14 mi (23 km) upstream from Headgate Rock Dam.

DRAINAGE AREA.--178,800 mi^2 (463,100 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1963 to September 1973.
Water temperatures: February 1954 to August 1970.
Prior to October 1968, published as 09428000.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
OCT. 01...	0815	9310	8.9	20	87	31	100	5.3
NOV. 05...	1200	9300	8.9	20	79	31	100	4.8
DEC. 03...	1100	4410	8.9	20	88	31	110	5.0
JAN. 07...	1115	8830	8.7	20	86	32	110	5.1
APR. 01...	0845	16160	10	9	82	28	100	5.2
MAY 06...	1130	18200	8.7	20	88	29	110	4.7
JUNE 03...	0900	9000	8.3	9	88	31	110	4.8
AUG. 05...	0910	15900	9.9	0	92	30	110	5.0

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)
OCT. 01...	144	0	310	93	.4	--	--	.26	160
NOV. 05...	159	0	300	94	.4	1.0	.0	.23	140
DEC. 03...	157	0	310	96	.4	1.0	.0	.23	160
JAN. 07...	157	0	320	98	.4	1.5	.0	.34	150
APR. 01...	158	0	290	87	.4	1.8	.0	.41	170
MAY 06...	162	0	310	96	.5	1.5	.1	.36	150
JUNE 03...	168	0	310	91	.5	1.5	.1	.38	150
AUG. 05...	177	0	320	93	.3	4.4	.0	1.0	50

09427520 COLORADO RIVER BELOW PARKER DAM, ARIZ.-CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT. 01...	734	708	1.00	340	230	2.3	1140	7.5
NOV. 05...	714	698	.97	320	190	2.4	1120	7.6
DEC. 03...	738	729	1.00	350	220	2.6	1150	7.4
JAN. 07...	734	741	1.00	350	220	2.6	1150	8.0
APR. 01...	662	684	.90	320	190	2.4	1060	8.1
MAY 06...	730	730	.99	340	210	2.6	1140	7.6
JUNE 03...	700	730	.95	350	210	2.6	1110	7.9
AUG. 05...	732	752	1.00	350	210	2.5	1140	7.6

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT. 18...	1115	--	1030	7.7	22.0	18.0	7.8	1
NOV. 15...	1100	4580	1110	7.6	16.5	19.0	8.1	1
DEC. 13...	1135	4550	1190	8.2	11.0	7.5	9.8	1
JAN. 17...	1100	4610	1220	8.1	9.0	17.0	10.5	1
FEB. 13...	1130	9090	1190	8.0	10.0	12.5	10.3	1
MAR. 20...	1045	13200	1120	7.9	13.5	17.0	9.6	2
MAY 15...	1155	14200	1140	8.1	19.5	35.0	8.4	1
JUNE 19...	1200	14400	1120	8.1	24.0	35.0	8.1	1
JULY 25...	1025	18400	1100	7.7	24.5	38.0	7.1	1
AUG. 22...	1030	13700	1080	8.0	24.0	34.0	7.6	15
SEP. 18...	1130	13700	1080	7.8	23.0	36.5	7.0	1

09428500 COLORADO RIVER INDIAN RESERVATION MAIN CANAL NEAR PARKER, ARIZ.

LOCATION.--Lat 34°10'04", long 114°16'33", in SE¼NW¼ sec.31, T.10 N., R.19 W., Yuma County, at gaging station on Arizona end of Headgate Rock Dam, on Colorado River Indian Reservation, 1.7 mi (2.7 km) northeast of Parker, and 14 mi (23 km) downstream from Parker Dam.

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1973.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-63 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	1155	--	9.3	10	84	31	90	5.2	189
NOV.									
06...	1240	--	8.8	10	82	30	100	4.9	192
DEC.									
04...	1240	--	8.9	9	82	32	120	5.0	199
JAN.									
02...	1300	--	9.2	20	80	32	120	5.1	161
FEB.									
04...	0945	931	8.5	9	82	32	120	4.7	163
12...	1350	--	8.6	9	85	32	110	5.6	160
MAR.									
05...	1110	--	9.4	9	86	30	110	5.1	166
APR.									
02...	1000	--	9.9	9	84	29	100	5.3	190
30...	1305	--	8.1	70	87	31	110	4.9	162
JUNE									
04...	0915	--	8.5	20	80	31	110	4.9	169
JULY									
02...	0920	--	8.4	10	80	31	110	5.0	197
30...	0920	--	9.3	10	82	31	110	5.0	193
SEP.									
04...	1010	--	9.3	0	80	31	110	5.0	189

DIVERSIONS AND RETURN FLOWS BETWEEN PARKER DAM AND PALO VERDE DAM

09428500 COLORADO RIVER INDIAN RESERVATION MAIN CANAL NEAR PARKER, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
02...	0	310	95	.5	--	--	.49	170	736
NOV.									
06...	0	290	93	.5	.90	.0	.22	140	726
DEC.									
04...	0	320	97	.5	.90	.0	.22	160	734
JAN.									
02...	0	330	100	.4	1.7	.0	.38	160	760
FEB.									
04...	0	320	97	.3	1.3	.0	.31	170	738
12...	0	330	96	.5	--	--	--	--	746
MAR.									
05...	0	310	95	.3	1.6	.0	.39	150	704
APR.									
02...	0	300	90	.4	1.9	.0	.43	180	692
30...	0	310	96	.4	.40	.0	.10	150	726
JUNE									
04...	0	310	91	.5	1.2	.0	.29	150	708
JULY									
02...	0	320	94	.5	1.2	.0	.27	140	696
30...	0	320	97	.4	.80	.0	.21	180	706
SEP.									
04...	0	310	93	.3	.40	.0	.09	170	706

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
02...	709	1.00	340	220	2.3	1140	7.7	--
NOV.								
06...	686	.99	330	200	2.4	1130	7.5	--
DEC.								
04...	746	1.00	340	210	2.8	1150	7.5	14.5
JAN.								
02...	768	1.03	350	220	2.8	1180	8.1	--
FEB.								
04...	748	1.00	340	200	2.8	1150	8.3	--
12...	748	1.01	340	210	2.6	1160	8.1	11.0
MAR.								
05...	731	.96	340	200	2.6	1120	8.0	--
APR.								
02...	700	.94	330	200	2.4	1080	8.2	16.0
30...	728	.99	350	210	2.6	1140	8.1	18.5
JUNE								
04...	720	.96	350	210	2.6	1120	7.9	23.0
JULY								
02...	736	.95	350	220	2.6	1120	7.9	23.5
30...	731	.96	330	210	2.6	1110	7.6	24.0
SEP.								
04...	713	.96	330	210	2.6	1100	7.9	24.5

09428510 POSTON WASTEWAY NEAR POSTON, ARIZ.

LOCATION.--Lat 33°59'58", long 114°26'41", in SW¼SE¼ sec.28, T.8 N., R.21 W., Yuma County, at gaging station 0.8 mi (1.3 km) upstream from mouth, 2.5 mi (4.0 km) west of Poston, and 14 mi (23 km) southwest of Parker.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1965-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	1115	--	20	10	120	39	150	5.6	212
NOV.									
06...	1150	--	17	20	130	45	180	5.1	265
DEC.									
04...	1200	--	15	9	110	41	180	5.2	235
JAN.									
02...	1230	--	18	9	140	46	200	6.2	263
FEB.									
12...	1230	--	11	9	100	35	140	5.3	195
MAR.									
05...	0930	--	14	9	110	37	160	5.3	225
APR.									
02...	0915	--	12	9	100	33	130	5.3	189
30...	1145	364	14	9	120	41	160	5.5	232
JUNE									
04...	0830	370	9.5	9	98	33	120	5.0	182
JULY									
02...	0750	--	13	0	110	37	150	5.0	206
30...	0750	--	16	20	130	41	170	5.3	236
SEP.									
04...	0845	--	12	10	100	36	140	6.0	189

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DIS. SOLVED NITRATE (NO3) (MG/L)	DIS. SOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT.									
02...	0	430	140	.4	--	--	.45	200	1020
NOV.									
06...	0	470	170	.5	1.2	.0	.28	220	1170
DEC.									
04...	0	460	150	.6	.80	.1	.23	230	1110
JAN.									
02...	0	520	180	.5	2.8	.0	.64	290	1220
FEB.									
12...	0	390	120	.4	5.3	.6	.34	180	874
MAR.									
05...	0	420	140	.3	1.6	.0	.36	220	1000
APR.									
02...	0	370	110	.3	1.8	.0	.40	200	844
30...	0	450	150	.5	.40	.1	.11	230	1060
JUNE									
04...	0	340	110	.4	1.2	.0	.28	160	842
JULY									
02...	0	420	140	.5	1.2	.0	.27	180	938
30...	0	450	150	.5	.90	.0	.21	220	1060
SEP.									
04...	0	410	120	.3	.60	.0	.15	170	888

09428510 POSTON WASTEWAY NEAR POSTON, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
02...	1010	1.39	460	290	3.0	1550	7.0	--
NOV.								
06...	1150	1.59	510	290	3.5	1750	7.7	--
DEC.								
04...	1080	1.51	440	250	3.7	1630	7.7	--
JAN.								
02...	1250	1.66	540	320	3.8	1820	8.1	9.5
FEB.								
12...	901	1.19	390	230	3.1	1360	8.1	12.0
MAR.								
05...	1000	1.36	430	240	3.4	1510	8.0	14.0
APR.								
02...	858	1.15	390	230	2.9	1290	8.2	15.5
30...	1060	1.44	470	280	3.2	1580	7.8	19.0
JUNE								
04...	808	1.15	380	230	2.7	1250	7.9	23.5
JULY								
02...	978	1.28	430	260	3.2	1450	7.9	23.5
30...	1080	1.44	490	300	3.3	1600	7.6	24.0
SEP.								
04...	918	1.21	400	240	3.1	1350	7.9	25.0

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	ALDRIN (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI-ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)
MAY											
14...	1545	--	.00	.00	.00	.00	.00	.00	.00	.00	.00
29...	0845	160	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUNE											
04...	0840	249	.00	.00	.00	.01	.00	.00	.00	.00	.00
19...	1135	184	.00	.00	.00	.00	.00	.00	.00	.00	.00
27...	1345	173	.00	.00	.00	.00	.00	.00	.00	.00	.00
JULY											
31...	1115	--	.00	.00	.00	.01	.00	.00	.00	.00	.00
AUG.											
21...	1355	230	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	CHLOR-DANE (UG/L)	DI-AZINON (UG/L)	MALA-THION (UG/L)	METHYL PARA-THION (UG/L)	PARA-THION (UG/L)	PCB (UG/L)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)	TOX-APHENE (UG/L)
MAY										
14...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
29...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
JUNE										
04...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
19...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
27...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
JULY										
31...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
AUG.										
21...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0

09429000 PALO VERDE CANAL NEAR BLYTHE, CALIF.

LOCATION.--Lat 33°43'55", long 114°30'40", in NW¼NE¼ sec.19, T.5 S., R.24 E., San Bernardino meridian, Riverside County, at gaging station at canal intake structure on west side of Palo Verde Dam, 10 mi (16 km) northeast of Blythe, and 44 mi (71 km) downstream from Headgate Rock Dam.

PERIOD OF RECORD.--Chemical analyses: March 1970 to September 1973.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)
OCT.								
02...	1025	8.9	10	84	32	100	5.2	148
NOV.								
06...	1100	9.0	10	83	31	100	4.9	155
DEC.								
04...	1110	9.1	20	91	32	120	5.0	163
JAN.								
02...	1140	8.9	9	88	32	120	5.1	157
FEB.								
12...	1145	8.8	9	87	32	110	5.1	163
MAR.								
05...	0850	9.9	9	87	30	110	6.4	170
APR.								
02...	0840	10	9	84	28	100	5.0	163
30...	1100	8.1	40	87	31	110	5.1	163
JUNE								
04...	0730	8.3	9	89	31	110	4.9	172
JULY								
02...	0700	8.5	0	89	31	110	5.2	162
30...	0705	9.3	20	82	31	110	5.1	153
SEP.								
04...	0745	9.4	10	81	31	110	5.9	149

09429000 PALO VERDE CANAL NEAR BLYTHE, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT.									
02...	0	320	97	.4	--	--	.27	150	736
NOV.									
06...	0	300	96	.4	1.0	.0	.24	150	736
DEC									
04...	0	330	100	.4	1.1	.0	.25	170	766
JAN.									
02...	0	340	100	.4	1.7	.0	.38	170	766
FEB.									
12...	0	330	97	.4	2.4	.1	.55	160	748
MAR.									
05...	0	320	97	.4	2.3	2.2	.66	160	742
APR.									
02...	0	290	90	.3	2.0	.0	.45	190	688
30...	0	310	95	.3	.30	.0	.07	150	744
JUNE									
04...	0	310	96	.5	1.2	.0	.28	150	740
JULY									
02...	0	330	99	.4	1.9	.3	.54	160	726
30...	0	320	99	.4	1.3	.1	.34	160	710
SEP.									
04...	0	320	95	.3	.40	.0	.10	130	720

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT.								
02...	722	1.00	340	220	2.4	1140	8.0	22.0
NOV.								
06...	703	1.00	330	210	2.4	1140	7.3	--
DEC.								
04...	770	1.04	360	230	2.8	1180	7.6	14.0
JAN.								
02...	775	1.04	350	220	2.8	1180	8.2	--
FEB.								
12...	756	1.02	350	220	2.6	1160	8.2	11.5
MAR.								
05...	750	1.01	340	200	2.6	1150	7.6	13.0
APR.								
02...	692	.94	330	190	2.4	1080	8.0	14.5
30...	728	1.01	350	210	2.6	1150	8.0	19.5
JUNE								
04...	737	1.01	350	210	2.6	1150	8.0	23.5
JULY								
02...	756	.99	350	220	2.6	1160	7.8	24.5
30...	734	.97	330	210	2.6	1120	7.9	25.5
SEP.								
04...	727	.98	330	210	2.6	1120	7.9	24.0

09429030 PALO VERDE DRAIN NEAR PARKER, ARIZ.

LOCATION.--Lat 33°45'25", long 114°29'48", in NE¼SW¼ sec.24, T.5 N., R.22 W., Yuma County, at bridge, 0.5 mi (0.8 km) above mouth, 0.5 mi (0.8 km) northeast of Palo Verde Dam, 9 mi (14 km) north of Ehrenberg, and 31 mi (50 km) southwest of Parker.

PERIOD OF RECORD.--October 1968 to September 1973.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	1035		22	10	150	45	200	4.5	248
NOV.									
06.	1115	--	22	10	140	46	190	4.3	257
DEC.									
04...	1125	--	23	20	150	45	190	4.5	247
JAN.									
02...	1155	--	22	9	140	44	190	4.6	238
FEB.									
12...	1155	--	22	9	140	42	180	4.6	242
MAR.									
05...	0900	--	22	9	140	41	180	4.4	240
APR.									
02...	0855	--	21	9	140	42	170	4.6	232
30...	1115	54	21	9	140	44	180	4.3	235
JUNE									
04...	0755	--	15	9	140	47	230	5.6	253
JULY									
02...	0720	--	24	10	150	46	190	4.6	241
30...	0720	36	23	10	150	46	200	4.6	251
SEP.									
04...	0805	--	22	20	150	48	220	5.0	254

09429030 PALO VERDE DRAIN NEAR PARKER, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS_ SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
02...	0	490	200	.4	--	--	.00	200	1240
NOV.									
06...	0	480	210	.4	.30	.0	.07	210	1240
DEC.									
04...	0	490	190	.4	.30	.0	.08	220	1230
JAN.									
02...	0	480	190	.4	1.2	.0	.28	200	1200
FEB.									
12...	0	480	180	.4	--	.3	.22	--	1130
MAR.									
05...	0	480	180	.3	1.7	.0	.38	200	1170
APR.									
02...	0	480	180	.3	1.1	.0	.25	200	1150
30...	0	460	180	.4	.10	.1	.06	210	1210
JUNE									
04...	0	500	240	.7	1.4	.0	.31	280	1340
JULY									
02...	0	500	200	1.1	.50	.1	.16	200	1200
30...	0	520	210	.4	.20	.0	.07	230	1260
SEP.									
04...	0	540	220	.3	.04	.3	.11	230	1330

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
02...	1230	1.69	560	360	3.7	1850	8.0	--
NOV.								
06...	1220	1.69	540	330	3.6	1870	7.6	--
DEC.								
04...	1220	1.67	560	360	3.5	1810	7.6	--
JAN.								
02...	1190	1.63	530	340	3.6	1790	8.1	--
FEB.								
12...	1170	1.54	520	320	3.4	1740	7.9	17.0
MAR.								
05...	1170	1.59	520	320	3.4	1730	7.9	15.5
APR.								
02...	1150	1.56	520	330	3.2	1710	8.1	16.5
30...	1150	1.65	530	340	3.4	1760	7.8	20.5
JUNE								
04...	1310	1.82	540	340	4.3	1990	8.0	23.0
JULY								
02...	1240	1.63	560	370	3.5	1810	7.8	25.0
30...	1280	1.71	560	360	3.7	1870	7.7	23.5
SEP.								
04...	1330	1.81	570	360	4.0	1950	8.1	21.0

09429060 LOWER MAIN DRAIN NEAR PARKER, ARIZ.

LOCATION.--Lat 33°45'40", long 114°29'05", in SW¼NW¼ sec.19, T.5 N., R.21 W., Yuma County, at gaging station, 2.8 mi (4.5 km) above outlet to Colorado River, and 31 mi (50 km) south of Parker.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	1040	--	15	10	130	45	210	5.6	230
NOV.									
06...	1120	--	16	10	140	52	270	5.6	261
DEC.									
04...	1135	--	15	20	140	47	260	5.7	242
JAN.									
02...	1200	--	13	20	110	41	200	5.7	208
FEB.									
12...	1200	--	14	9	130	44	210	5.7	236
MAR.									
05...	0905	--	12	9	110	40	200	5.6	211
APR.									
02...	0900	--	15	9	130	43	220	6.0	227
30...	1120	242	15	9	130	48	250	5.6	246
JUNE									
04...	0850	264	21	9	150	46	190	4.2	247
JULY									
02...	0715	255	17	10	150	52	270	5.7	257
30...	0725	196	17	10	140	52	270	5.9	256
SEP.									
04...	0810	--	15	10	120	42	220	5.9	226

09429060 LOWER MAIN DRAIN NEAR PARKER, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS_ SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
02...	0	490	230	.6	--	--	.26	300	1250
NOV.									
06...	0	540	310	.7	1.8	.0	.42	390	1520
DEC.									
04...	0	530	270	.7	1.6	.3	.49	360	1410
JAN.									
02...	0	450	200	.5	2.2	.0	.49	250	1140
FEB.									
12...	0	490	210	.5	2.6	.4	.71	260	1180
MAR.									
05...	0	440	200	.6	4.1	.0	.92	270	1140
APR.									
02...	0	490	220	.6	4.2	.0	.94	310	1230
30...	0	530	260	.7	.40	.0	.11	330	1370
JUNE									
04...	0	470	190	.6	.10	.0	.05	210	1220
JULY									
02...	0	580	290	1.0	1.8	.0	.40	360	1460
30...	0	570	290	.6	1.0	.0	.23	360	1460
SEP.									
04...	0	490	210	.5	.66	.0	.15	240	1200

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
02...	1240	1.70	510	320	4.0	1910	8.1	--
NOV.								
06...	1470	2.07	560	350	5.0	2300	7.6	--
DEC.								
04...	1390	1.92	540	340	4.9	2120	8.0	--
JAN.								
02...	1130	1.55	440	270	4.1	1720	8.1	--
FEB.								
12...	1220	1.60	500	310	4.1	1860	8.0	14.0
MAR.								
05...	1120	1.55	440	270	4.2	1730	8.0	13.5
APR.								
02...	1250	1.67	500	320	4.3	1870	8.1	17.0
30...	1360	1.86	520	320	4.8	2080	7.8	20.0
JUNE								
04...	1190	1.66	560	360	3.5	1830	7.5	22.0
JULY								
02...	1490	1.99	590	380	4.8	2230	8.0	25.5
30...	1470	1.99	560	350	5.0	2220	7.9	245
SEP.								
04...	1220	1.63	470	290	4.4	1800	8.1	24.5

09429130 PALO VERDE IRRIGATION DISTRICT OLIVE LAKE DRAIN NEAR BLYTHE, CALIF.

LOCATION.--Lat 33°40'36", long 114°32'09", in SW¼SW¼ sec.1, T.6 S., R.23 E., San Bernardino meridian, Riverside County, 0.3 mi (0.5 km) upstream from mouth, and 5 mi (8 km) northeast of Blythe.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1970 (partial-record station), October 1970 to September 1973.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT. 02...	1110	--	18	20	140	39	160	5.2	284
NOV. 01...	1100	11	19	20	150	41	160	5.6	293
DEC. 05...	1300	12	19	20	150	41	160	5.2	308
JAN. 03...	1335	11	18	9	150	42	170	5.3	304
FEB. 01...	1100	7.0	19	20	160	43	170	5.4	315
MAR. 02...	1500	9.0	18	30	150	41	170	5.5	305
APR. 05...	0930	9.0	16	9	130	39	150	5.3	266
MAY 02...	1430	15	16	9	130	41	150	5.3	266
JUNE 08...	1045	18	17	9	140	40	150	5.2	279
JULY 06...	1630	21	17	10	150	42	150	5.4	285
AUG. 07...	1335	18	18	30	140	40	150	5.2	296
SEP. 04...	0900	24	17	20	130	39	160	5.7	268

09429130 PALO VERDE IRRIGATION DISTRICT OLIVE LAKE DRAIN NEAR BLYTHE, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS_ SOLVED NITRITE (NO2) (MG/L)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)
OCT. 02...	0	440	140	.5	--	--	.10	220	1080
NOV. 01...	0	430	140	.4	.70	.7	.40	200	1100
DEC. 05...	0	460	150	.4	.70	.2	.22	200	1110
JAN. 03...	0	460	150	.3	.30	.0	.07	190	1190
FEB. 01...	0	470	160	.4	.50	.0	.13	210	1160
MAR. 02...	0	460	150	.5	.30	.1	.10	200	1130
APR. 05...	0	420	130	.4	.40	.0	.09	100	1030
MAY 02...	0	430	140	.4	.00	.2	.06	190	1050
JUNE 08...	0	400	130	.5	.80	.1	.23	160	1040
JULY 06...	0	460	140	.5	.20	.0	.05	200	1090
AUG. 07...	0	400	140	.5	.40	.0	.10	190	994
SEP. 04...	0	420	140	.3	.90	.0	.22	210	1050

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT. 02...	1080	1.47	510	280	3.1	1600	7.7	22.0
NOV. 01...	1090	1.50	540	300	3.0	1670	7.7	17.0
DEC. 05...	1140	1.51	540	290	3.0	1670	7.4	15.0
JAN. 03...	1150	1.62	550	300	3.2	1660	8.0	16.0
FEB. 01...	1180	1.58	580	320	3.1	1720	8.0	12.5
MAR. 02...	1150	1.54	540	290	3.2	1670	8.0	--
APR. 05...	1020	1.40	490	270	3.0	1540	8.0	--
MAY 02...	1040	1.43	490	280	2.9	1540	7.6	24.0
JUNE 08...	1020	1.41	510	290	2.9	1570	7.5	25.0
JULY 06...	1110	1.48	550	310	2.8	1630	7.9	27.0
AUG. 07...	1040	1.35	510	280	2.9	1560	7.8	24.5
SEP. 04...	1050	1.43	490	270	3.2	1580	7.9	22.5

09429188 COLORADO RIVER AT TAYLOR FERRY, NEAR BLYTHE, CALIF.

LOCATION.--Lat 33°26'03", long 114°37'35", in SE¼ sec.36, T.8 S., R.22 E., San Bernardino meridian, Riverside County, at gaging station, at site of old Taylor Ferry, 2.5 mi (4.0 km) upstream from Cibola Bridge, 12 mi (19 km) south of Blythe, Calif., 28 mi (45 km) downstream from Palo Verde Dam, and 62 mi (100 km) upstream from Imperial Dam.

DRAINAGE AREA.--183,700 mi² (475,800 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: April 1970 to September 1973.

REMARKS.--Gaging station operated by Bureau of Reclamation.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	0920	--	15	10	85	32	110	5.1	156
NOV.									
06...	1015	--	9.5	20	85	33	120	4.9	173
DEC.									
04...	1010	--	9.5	20	89	32	130	4.9	168
JAN.									
02...	1045	--	9.5	9	91	33	120	5.0	163
FEB.									
12...	1050	5940	9.2	9	90	32	120	5.0	169
MAR.									
05...	1255	9360	9.8	20	86	30	120	5.1	172
APR.									
02...	1220	9320	11	9	83	29	100	5.3	166
30...	1015	9290	8.7	9	94	32	120	5.3	172
JUNE									
04...	1410	6360	9.4	9	98	33	120	5.1	180
JULY									
02...	1105	9660	9.2	10	90	32	120	4.9	167
30...	1125	11120	9.7	10	85	32	120	5.1	160
SEP.									
04...	1415	9190	10	10	86	32	120	6.0	161

09429188 COLORADO RIVER AT TAYLOR FERRY, NEAR BLYTHE, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
02...	0	330	100	.4	--	--	.49	170	762
NOV.									
06...	0	320	110	.5	1.0	.0	.22	150	786
DEC.									
04...	0	330	110	.4	1.0	.0	.23	170	782
JAN.									
02...	0	340	110	.5	1.7	.0	.38	220	788
FEB.									
12...	0	340	110	.4	1.3	.0	.30	170	780
MAR.									
05...	0	320	100	.3	1.3	--	.30	170	738
APR.									
02...	0	290	93	.4	1.9	.0	.43	170	694
30...	0	330	110	.4	.30	.0	.08	170	782
JUNE									
04...	0	330	110	.4	1.3	.0	.29	160	824
JULY									
02...	0	330	100	.8	1.2	.0	.28	150	746
30...	0	340	100	.4	.70	.0	.17	140	740
SEP.									
04...	0	320	100	.3	.50	.0	.13	150	762

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
02...	757	1.04	340	220	2.6	1190	7.3	--
NOV.								
06...	770	1.07	350	210	2.8	1220	7.6	17.0
DEC.								
04...	791	1.06	350	220	3.0	1230	8.0	--
JAN.								
02...	793	1.07	360	230	2.7	1220	8.1	--
FEB.								
12...	791	1.06	360	220	2.8	1210	8.2	11.0
MAR.								
05...	757	1.00	340	200	2.8	1160	8.2	14.5
APR.								
02...	698	.94	330	190	2.4	1100	8.3	14.0
30...	786	1.06	370	230	2.7	1230	7.5	20.5
JUNE								
04...	797	1.12	380	230	2.7	1230	8.1	26.5
JULY								
02...	771	1.01	360	220	2.8	1190	8.0	26.5
30...	772	1.01	340	210	2.8	1170	7.0	26.0
SEP.								
04...	754	1.04	350	210	2.8	1180	8.1	26.5

09429220 PALO VERDE IRRIGATION DISTRICT OUTFALL DRAIN NEAR PALO VERDE, CALIF.

LOCATION.--Lat 33°21'41", long 114°43'20", in SE¼SE¼ sec.26, T.9 S., R.21 E., San Bernardino meridian, Imperial County, at gaging station, at State Highway 78 bridge, 3.3 mi (5.3 km) upstream from mouth, and 5 mi (8 km) south of Palo Verde.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	0750	--	9.3	10	130	44	380	6.1	318
NOV.									
06...	0810	--	21	10	150	45	430	5.8	332
DEC.									
04...	0830	--	22	0	150	46	460	6.2	333
JAN.									
02...	0900	--	21	9	140	46	460	6.1	318
FEB.									
11...	0905	--	20	9	140	46	460	6.7	327
MAR.									
05...	1325	416	21	9	150	49	450	6.8	300
APR.									
02...	1305	521	20	50	130	42	370	6.2	297
30...	0810	619	21	0	140	46	420	6.6	323
JUNE									
04...	1350	710	21	9	140	45	410	5.9	321
JULY									
30...	1230	682	21	10	130	46	400	5.9	310
SEP.									
04...	1245	674	22	10	140	45	470	6.6	330

09429220 PALO VERDE IRRIGATION DISTRICT OUTFALL DRAIN NEAR PALO VERDE, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS. SOLVED NITRATE (NO3) (MG/L)	DIS. SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT. 02...	0	590	370	1.2	--	--	.40	400	1720
NOV. 06...	0	600	450	1.2	2.3	.0	.53	610	1860
DEC. 04...	0	600	460	1.3	2.2	.1	.53	640	1970
JAN. 02...	0	620	450	1.3	2.7	.0	.60	600	1870
FEB. 11...	0	630	430	1.2	1.9	.2	.54	620	1780
MAR. 05...	0	620	460	1.2	3.1	.0	.71	640	1870
APR. 02...	0	580	380	1.1	3.2	.0	.73	560	1660
30...	0	600	420	1.2	.70	.0	.17	620	1830
JUNE 04...	0	590	390	1.2	1.5	.1	.37	560	1740
JULY 30...	0	590	390	1.1	1.9	.0	.43	580	1700
SEP. 04...	0	610	420	1.1	1.9	.0	.43	600	1810

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 02...	1690	2.34	510	250	7.4	2620	7.9	--
NOV. 06...	1870	2.53	560	290	7.9	2920	7.6	19.0
DEC. 04...	1910	2.68	580	270	8.6	3000	7.8	--
JAN. 02...	1900	2.54	580	280	8.2	2900	8.0	--
FEB. 11...	1880	2.42	580	270	8.2	2800	8.0	16.0
MAR. 05...	1940	2.54	580	300	8.2	2970	8.0	16.5
APR. 02...	1680	2.26	500	260	7.2	2590	8.3	19.5
30...	1820	2.49	580	270	7.8	2830	7.7	21.5
JUNE 04...	1770	2.37	580	270	7.7	2720	7.9	25.5
JULY 30...	1780	2.31	510	260	7.7	2670	7.8	26.5
SEP. 04...	1860	2.46	580	260	8.0	2810	8.2	26.0

09429225 ANDERSON DRAIN NEAR PALO VERDE, CALIF.

LOCATION.--Lat 33°21'19", long 114°43'00", in SW¼ sec.36, T.9 S., R.21 E., San Bernardino meridian, Imperial County, 0.1 mi (0.2 km) upstream from pump into Outfall Drain, and 5.5 mi (8.8 km) south of Palo Verde.

PERIOD OF RECORD.--Chemical analyses: Water year 1969 (partial-record station), October 1969 to September 1973.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1966-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	0830	--	25	30	110	57	870	6.7	608
NOV.									
01...	1035	.09	23	60	120	56	680	7.8	555
DEC.									
01...	1630	9.0	24	50	81	29	770	5.3	594
JAN.									
03...	1130	9.0	24	100	82	42	1000	5.7	646
FEB.									
01...	1610	1.9	23	110	89	42	1100	5.9	612
MAR.									
01...	1620	.52	24	250	66	32	1100	6.2	652
APR.									
02...	1600	.66	25	80	86	40	1300	6.9	689
MAY									
01...	1250	.66	23	80	56	28	840	5.7	589
JUNE									
01...	1135	--	28	50	59	20	660	5.0	565
JULY									
06...	1620	1.0	23	70	78	40	1000	6.6	576
AUG.									
01...	1305	.00	23	60	86	48	1100	5.7	592
SEP.									
06...	1500	10	28	70	98	49	1000	5.4	589

09429225 ANDERSON DRAIN NEAR PALO VERDE, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
02...	0	920	750	1.9	--	--	.03	1500	3030
NOV.									
01...	0	870	690	1.2	.40	.5	.29	1000	2540
DEC.									
01...	0	810	640	2.3	.10	.1	.08	1500	2690
JAN.									
03...	0	1000	1100	2.7	.20	.0	.04	2200	--
FEB.									
01...	0	910	900	6.5	.10	.0	.03	1900	3330
MAR.									
01...	0	960	910	3.9	.10	.1	.06	2900	3400
APR.									
02...	0	1000	1100	2.1	.10	.0	.02	2400	4220
MAY									
01...	0	810	620	2.1	.00	.0	.01	1600	2670
JUNE									
01...	0	650	600	2.9	3.5	.0	.78	1300	2290
JULY									
06...	0	910	800	3.1	.20	.6	.18	1800	3270
AUG.									
01...	0	900	970	2.8	.00	.0	.05	1700	3510
SEP.									
04...	0	1000	860	2.2	.12	.5	.23	1600	3350

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
02...	3040	4.12	910	11	17	4660	7.9	19.0
NOV.								
01...	2520	3.45	930	78	13	3820	7.7	17.0
DEC.								
01...	2670	3.66	380	0	18	4210	7.8	17.0
JAN.								
03...	3880	5.28	380	0	29	5790	8.3	18.0
FEB.								
01...	3300	4.53	390	0	24	5180	8.2	12.0
MAR.								
01...	3420	4.62	270	0	28	4850	8.3	24.0
APR.								
02...	3880	5.74	380	0	29	6110	8.1	16.0
MAY								
01...	2670	3.63	290	0	23	3930	8.4	28.0
JUNE								
01...	2220	3.11	270	0	18	3570	8.4	30.1
JULY								
06...	3290	4.45	360	0	23	4790	8.4	--
AUG.								
01...	3510	4.77	410	0	28	5560	8.4	--
SEP.								
04...	3310	4.56	400	0	25	4630	8.4	28.5

09429300 COLORADO RIVER BELOW CIBOLA VALLEY, ARIZ.

LOCATION.--Lat 33°13'16", long 114°40'18", in NE¼SW¼ sec.30, T.2 S., R.23 W., Yuma County, at gaging station on left bank 6.7 mi (10.8 km) south of Cibola, 38 mi (61 km) upstream from Imperial Dam, and 52.1 mi (83.2 km) downstream from Palo Verde Dam.

DRAINAGE AREA.--183,800 mi² (476,000 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: January 1969 to September 1973.
Water temperatures: March 1956 to December 1966.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	0800	--	10	10	90	32	130	5.3	165
NOV.									
06...	0900	--	10	10	86	33	130	4.9	171
DEC.									
04...	0900	--	11	9	94	35	160	5.1	198
JAN.									
02...	0930	--	10	9	93	34	160	5.2	179
FEB.									
11...	0925	--	11	9	99	33	170	5.2	193
MAR.									
05...	1600	--	10	9	92	33	140	5.2	181
APR.									
02...	1200	--	12	20	91	32	140	5.4	179
30...	0825	--	9.9	9	89	32	130	5.3	172
JUNE									
04...	1200	7120	12	9	100	35	190	5.2	212
JULY									
30...	1200	--	11	10	89	33	150	5.1	177
SEP.									
06...	1337	--	11	10	96	33	170	5.6	186

COLORADO RIVER MAIN STEM

09429300 COLORADO RIVER BELOW CIBOLA VALLEY, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DIS. SOLVED NITRATE (NO3) (MG/L)	DIS. SOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT. 02...	0	340	120	.5	--	--	.26	460	810
NOV. 06...	0	330	120	.4	1.3	.0	.31	170	828
DEC. 04...	0	370	150	.5	1.3	.0	.29	230	922
JAN. 02...	0	380	140	.5	1.9	.0	.43	200	904
FEB. 11...	0	390	160	.5	1.4	.0	.33	230	956
MAR. 05...	0	350	130	.4	1.7	.0	.38	190	856
APR. 02...	0	340	120	.5	2.6	.0	.59	210	816
30...	0	330	120	.4	.30	.0	.07	190	798
JUNE 04...	0	400	170	.6	1.2	.0	.27	250	1040
JULY 30...	0	360	130	.5	.70	.0	.15	210	846
SEP. 04...	0	400	150	.3	.58	.0	.14	230	934

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 02...	811	1.10	360	230	3.0	1270	8.1	--
NOV. 06...	802	1.13	350	210	3.0	1290	7.6	--
DEC. 04...	926	1.25	380	220	3.6	1430	7.6	--
JAN. 02...	915	1.23	370	230	3.6	1410	8.2	--
FEB. 11...	967	1.30	380	220	3.8	1490	8.2	11.5
MAR. 05...	853	1.16	370	220	3.2	1300	8.2	15.0
APR. 02...	835	1.11	360	230	3.2	1280	8.1	16.5
30...	802	1.09	350	230	2.9	1240	7.8	25.0
JUNE 04...	1020	1.41	390	220	4.2	1580	7.9	26.0
JULY 30...	867	1.15	360	230	3.5	1300	7.0	26.0
SEP. 04...	957	1.27	380	220	3.8	1430	8.2	26.5

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.
(Irrigation Network, Pesticide, and Radiochemical Station)

LOCATION.--Lat 32°52'59", long 114°27'55", in NW¼SW¼ sec.9, T.15 S., R.24 E., San Bernardino meridian, Imperial County, Calif., above trash racks at All-American Canal headworks at west end of Imperial Dam, 5 mi (8 km) upstream from Laguna Dam, 15 mi (24 km) northeast of Yuma, 90 mi (145 km) downstream from Palo Verde Dam, and 147 mi (237 km) downstream from Parker Dam.

DRAINAGE AREA.--184,600 mi² (478,100 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: August 1969 to September 1973.
Prior to October 1971, published as sta 09429500, Colorado River at Imperial Dam, Ariz.-Calif.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	MEAN DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)
OCT.								
11...	3650	13	10	100	35	180	5.7	203
18...	3560	14	20	99	36	190	5.9	200
25...	3390	15	40	110	36	190	6.0	209
NOV.								
01...	5430	12	20	93	34	160	5.3	180
08...	6330	11	10	93	35	150	5.6	177
22...	3330	18	9	110	34	180	6.1	203
DEC.								
06...	6070	13	20	100	32	160	5.3	183
13...	6670	11	9	93	33	160	5.1	177
20...	6080	14	6	95	34	170	5.4	183
JAN.								
03...	7210	11	9	96	33	150	5.3	179
10...	7220	10	9	94	33	150	5.7	177
31...	8610	12	[illegible]	84	28	150	3.8	155
FEB.								
[illegible]	6250	11	40	95	28	150	5.6	180
[illegible]	5320	11	9	96	33	150	5.3	179
[illegible]	5900	11	9	99	33	150	5.3	186
MAR.								
[illegible]	[illegible]	11	[illegible]	95	32	150	5.1	189
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	31	[illegible]	5.1	176
[illegible]	[illegible]	11	[illegible]	[illegible]	31	[illegible]	[illegible]	181
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
APR.								
[illegible]	[illegible]	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	172
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	179
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	175
MAY								
[illegible]	[illegible]	[illegible]	20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JUNE								
[illegible]	[illegible]	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JULY								
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AUG.								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SEP.								
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.--Continued

EXTREMES.--1972-73:
Specific conductance: Maximum daily, 1,730 micromhos Nov. 28; minimum daily, 1,160 micromhos Mar. 26, 27.

Period of record:
Specific conductance: Maximum daily, 1,880 micromhos Nov. 21, 1969; minimum daily, 1,160 micromhos Mar. 26, 27, 1973

REMARKS.--Stream discharges reported with analyses represent total flow reaching Imperial Dam. Daily specific-conductance record furnished by Bureau of Reclamation. Since January 1971, daily specific-conductance measurements have been made using a composite of four water samples taken at 6-hour intervals. Composites of four water samples per day are analyzed for chemical constituents.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)
OCT.									
11...	0	400	170	.8	--	--	.40	.06	230
18...	0	400	180	.7	--	--	.10	.00	260
25...	0	440	180	.7	--	--	.15	.03	270
NOV.									
01...	0	250	140	.6	.90	.0	.21	.06	220
08...	0	260	140	.4	1.2	.0	.26	.03	200
22...	0	290	170	.7	8.0	.0	1.8	.18	220
DEC.									
06...	0	280	150	.6	1.4	.0	.26	.03	210
13...	0	250	120	.6	1.3	.0	.29	.00	200
20...	0	260	160	.6	1.4	.0	.28	.00	230
JAN.									
03...	0	250	120	.6	1.5	.0	.33	.03	200
10...	0	260	120	.5	1.4	.0	.32	.03	220
24...	0	280	150	.5	1.4	.0	.28	.00	250
FEB.									
01...	0	250	160	.6	1.5	.0	.34	.00	210
[illegible]	0	270	160	.5	1.5	.0	.33	.03	210
[illegible]	0	270	160	.5	1.2	.0	.29	.03	190
MAR.									
01...	0	270	160	.7	1.2	.0	.27	.03	210
[illegible]	0	320	120	.5	1.4	.0	.32	.03	190
[illegible]	0	250	120	.6	1.2	.0	.27	.00	190
[illegible]	0	320	120	.5	1.4	.0	.32	.00	150
APR.									
[illegible]	0	320	110	.5	1.0	.0	.22	.00	170
[illegible]	0	280	120	.6	1.4	.0	.27	.00	190
[illegible]	0	[illegible]	120	.5	1.1	.0	.25	.00	180
MAY									
[illegible]	0	280	120	.5	.20	.0	.06	.00	180
[illegible]	0	280	[illegible]	[illegible]	1.0	.0	.13	.00	190
JUNE									
[illegible]	0	250	140	.5	.80	.0	.08	.03	150
[illegible]	0	280	120	.6	.90	.0	[illegible]	.00	190
[illegible]	0	280	120	.5	.90	.0	[illegible]	.00	180
[illegible]	0	250	120	.5	[illegible]	.0	[illegible]	.00	190
JULY									
[illegible]	0	[illegible]	[illegible]	.6	--	--	--	--	--
[illegible]	0	[illegible]	[illegible]	.6	--	--	--	--	--
[illegible]	0	280	[illegible]	.5	--	--	--	--	--
[illegible]	0	[illegible]	[illegible]	.5	--	--	--	--	--
[illegible]	0	[illegible]	[illegible]	.7	--	--	--	--	--
[illegible]	0	280	[illegible]	.7	--	--	--	--	--
[illegible]	0	[illegible]	[illegible]	.6	[illegible]	.0	[illegible]	[illegible]	[illegible]
AUG.									
[illegible]	0	[illegible]	[illegible]	.5	[illegible]	.0	[illegible]	[illegible]	[illegible]
[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]	[illegible]
SEPT.									
[illegible]	0	[illegible]	[illegible]	.6	--	--	--	--	--
[illegible]	0	280	[illegible]	.6	--	--	--	--	--
[illegible]	0	280	[illegible]	[illegible]	--	--	--	--	--
[illegible]	0	280	[illegible]	[illegible]	--	--	--	--	--

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.								
11...	1020	1010	1.39	390	230	3.9	1560	7.5
18...	1040	1020	1.41	400	230	4.2	1610	7.8
25...	1070	1080	1.46	420	250	4.0	1660	7.9
NOV.								
01...	916	889	1.25	370	220	3.6	1410	7.7
08...	866	885	1.18	380	230	3.4	1380	8.0
22...	1040	1030	1.41	410	250	3.8	1560	7.1
DEC.								
06...	914	934	1.24	380	230	3.6	1430	7.6
13...	856	872	1.16	370	220	3.6	1340	8.3
20...	908	911	1.23	380	230	3.8	1410	8.2
JAN.								
03...	888	867	1.21	380	230	3.4	1350	8.1
10...	890	871	1.21	370	220	3.4	1350	8.3
21...	936	901	1.27	370	240	3.4	1450	7.5
FEB.								
01...	880	878	1.20	380	230	3.4	1380	8.0
10...	894	895	1.22	370	220	3.4	1380	8.1
20...	908	903	1.23	380	230	3.3	1390	8.3
MAR.								
01...	858	900	1.17	370	210	3.4	1370	8.1
10...	792	795	1.08	350	210	3.0	1250	8.2
20...	828	850	1.13	350	200	3.2	1300	8.1
30...	798	806	1.09	350	210	3.2	1220	8.1
APR.								
10...	780	776	1.06	350	210	2.8	1210	8.0
20...	816	830	1.11	360	210	3.2	1280	8.0
30...	820	842	1.12	360	230	2.9	1290	8.2
MAY								
10...	846	828	1.15	370	220	3.2	1300	8.0
20..	848	844	1.15	370	220	3.2	1320	7.7
JUNE								
01...	866	875	1.18	370	220	3.4	1350	8.0
11...	822	830	1.12	360	210	3.2	1290	8.1
20...	812	823	1.10	370	220	3.0	1300	7.8
30...	808	830	1.10	370	230	2.9	1300	8.1
JULY								
09...	798	813	1.08	360	218	3.1	1270	8.0
12...	812	821	1.10	360	222	3.1	1280	7.9
16...	818	819	1.11	360	222	3.1	1280	8.0
19...	790	798	1.07	355	220	3.0	1250	8.0
23...	792	795	1.08	355	220	3.0	1250	8.1
26...	800	815	1.09	360	224	3.1	1270	8.0
30...	796	797	1.08	350	210	3.0	1260	8.2
AUG.								
10...	828	887	1.13	360	230	2.9	1300	8.2
20...	800	837	1.09	350	240	3.2	1260	8.1
SEP.								
03...	826	836	1.12	365	224	3.2	1310	8.2
10...	822	831	1.12	360	219	3.2	1300	8.0
17...	818	826	1.11	360	219	3.2	1300	8.1
26...	812	809	1.10	355	220	3.1	1270	8.1

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)
OCT.									
18...	1110	--	--	--	23.0	--	--	160	--
19...	1500	2690	1560	8.2	22.5	23.5	8.8	--	--
NOV.									
15...	1115	--	--	--	15.5	--	--	3	--
16...	1430	5330	1340	8.4	1.8	22.5	8.1	--	--
DEC.									
13...	1145	--	--	--	9.0	--	--	28	--
14...	1410	6880	1450	8.2	9.0	14.0	9.3	--	--
JAN.									
17...	1350	--	--	--	12.5	--	--	9	--
18...	1540	5330	1480	8.2	13.0	20.0	9.2	--	--
FEB.									
13...	1200	--	--	--	12.5	--	--	17	--
14...	1410	4970	1470	8.2	13.0	20.0	10.2	--	--
MAR.									
20...	0845	--	--	--	16.5	--	--	14	--
21...	1430	9090	1250	8.2	16.0	18.5	8.2	--	--
APR.									
18...	0910	--	--	--	18.0	--	--	20	--
19...	1530	11900	1280	8.0	19.5	25.0	9.3	--	--
MAY									
15...	0915	--	--	--	23.0	--	--	20	--
16...	1300	9380	1180	8.1	25.0	38.0	8.4	--	--
JUNE									
19...	1155	--	--	--	26.0	--	--	12	--
20...	1430	8420	1380	8.2	26.0	42.0	8.8	--	--
JULY									
25...	1145	--	--	--	28.0	--	--	28	--
26...	1610	10900	1320	8.1	29.0	37.0	8.6	--	--
AUG.									
22...	0925	9660	--	--	28.5	--	--	45	160
23...	1400	9840	1380	7.8	30.0	42.0	7.6	--	--
SEP.									
18...	0950	9370	--	--	25.5	--	--	29	48
19...	1440	9630	1310	8.1	25.5	35.0	8.3	--	--

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	1400	1450	1390	1380	1370	1210	1310	1350	1300	1260	1310
2	1350	1400	1440	1340	1360	1340	1210	1290	1360	1250	1250	1320
3	1330	1370	1430	1350	1370	1300	1210	1300	1370	1270	1280	1310
4	1300	1360	1410	1370	1420	1310	1200	1300	1350	1260	1290	1310
5	1320	1360	1400	1340	1350	1270	1230	1330	1340	1290	1300	1290
6	1320	1360	1430	1330	1340	1260	1260	1320	1360	1280	1290	1290
7	1290	1340	1390	1380	1330	1260	1270	1300	1320	1290	1280	1290
8	1260	1340	1360	1340	1340	1260	1200	1310	1350	1280	1300	1300
9	1360	1360	1360	1350	1360	1240	1210	1290	1340	1270	1300	1310
10	1460	1380	1340	1340	1380	1240	1210	1300	1320	1280	1300	1300
11	1550	1400	1340	1320	1380	1270	1230	1320	1290	1290	1300	1290
12	1620	1420	1350	1410	1340	1280	1230	1350	1300	1280	1300	1290
13	1590	1370	1330	1470	1320	1260	1240	1340	1300	1300	1260	1280
14	1590	1330	1360	1480	1390	1280	1270	1310	1290	1300	1260	1290
15	1620	1330	1370	1440	1420	1330	1250	1320	1310	1300	1270	1330
16	1650	1340	1380	1410	1380	1350	1230	1310	1320	1280	1260	1330
17	1560	1400	1380	1410	1400	1370	1270	1330	1310	1280	1270	1300
18	1600	1420	1380	1430	1420	1350	1260	1330	1320	1280	1260	1290
19	1580	1440	1380	1430	1430	1300	1270	1320	1330	1250	1280	1300
20	1500	1480	1400	1470	1390	1300	1280	1320	1300	1270	1280	1300
21	1500	1540	1400	1440	1330	1290	1290	1310	1320	1270	1280	1300
22	1580	1540	1420	1440	1300	1260	1260	1310	1340	1260	1270	1290
23	1630	1540	1450	1420	1340	1260	1280	1330	1340	1250	1290	1300
24	1650	1640	1490	1410	1380	1230	1270	1350	1320	1260	1310	1270
25	1650	1680	1550	1380	1440	1210	1260	1360	1280	1260	1330	1320
26	1600	1650	1600	1380	1480	1160	1280	1350	1280	1270	1350	1320
27	1580	1720	1490	1440	1460	1160	1300	1340	1280	1280	1330	1310
28	1620	1730	1430	1440	1390	1170	1280	1310	1320	1300	1320	1330
29	1640	1680	1430	1410	---	1200	1350	1320	1290	1280	1300	1330
30	1520	1520	1420	1370	---	1220	1290	1340	1300	1260	1310	1330
31	1620	---	1400	1390	---	1220	---	1350	---	1250	1290	---
MEAN	1500	1460	1410	1400	1380	1270	1250	1320	1320	1280	1290	1300
YEAR	MAX	1730	MIN	1160	MEAN	1350						

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.--Continued

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED GROSS ALPHA AS U-NAT. (PC/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (PC/L)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)
OCT. 02...	1130	9.3	.2	28	.6	10	3.5
JULY 18...	1210	--	--	12	7.7	9.9	4.7

DATE	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED RA-226 (PLAN-CHET COUNT) (PC/L)	DIS-SOLVED NATURAL URANIUM (U) (UG/L)	TOTAL FILT-RABLE RESIDUE (MG/L)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)
OCT. 02...	9.0	3.1	--	.2	5.4	980	16
JULY 18...	8.6	4.1	.16	--	4.6	880	130

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	ALDRIN (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI-ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)
OCT. 19...	1500	269	.00	.00	.00	.00	.00	.00	.00	.00	.00
NOV. 16...	1630	533	.00	.00	.00	.00	.00	.00	.00	.00	.00
DEC. 14...	1610	688	.00	.00	.00	.00	.00	.00	.00	.00	.00
JAN. 18...	1540	533	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB. 14...	1610	497	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAR. 21...	1630	909	.00	.00	.00	.01	.00	.00	.00	.00	.00
APR. 19...	1530	1190	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY 16...	1300	938	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUNE 20...	1630	862	.00	.00	.00	.00	.00	.00	.00	.00	.00
JULY 26...	1610	--	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG. 23...	1400	966	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	CHLOR-DANE (UG/L)	DI-AZINON (UG/L)	MALA-THION (UG/L)	METHYL PARA-THION (UG/L)	PARA-THION (UG/L)	PCB (UG/L)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)	TOX-APHENE (UG/L)
OCT. 19...	.0	--	--	--	--	.0	.00	.00	.00	--
NOV. 16...	.0	--	--	--	--	.0	.00	.00	.00	--
DEC. 14...	.0	--	--	--	--	.0	.00	.00	.00	0
JAN. 18...	.0	.00	.00	.00	.00	.0	.00	.00	.00	0
FEB. 14...	.0	.00	.00	.00	.00	.0	--	--	--	0
MAR. 21...	.0	.00	.00	.00	.00	.0	.00	.00	.00	0
APR. 19...	.0	.00	.00	.00	.00	.0	.00	.00	.00	0
MAY 16...	.0	.01	.00	.00	.00	.0	.00	.00	.00	0
JUNE 20...	.0	.00	.00	.00	.00	.0	.00	.00	.00	0
JULY 26...	.0	.00	.00	.00	.00	.0	.00	.00	.00	0
AUG. 23...	.0	.00	.00	.00	.00	.0	.00	.00	.00	0

09429600 COLORADO RIVER BELOW LAGUNA DAM, ARIZ.-CALIF.

LOCATION.--Lat 32°48'44", long 114°30'51", in SE¼NE¼ sec.35, T.15 S., R.23 E., San Bernardino meridian, in California, Imperial County, at gaging station on right bank, 1.4 mi (2.3 km) downstream from Laguna Dam, 2.8 mi (4.5 km) northeast of Bard, Calif., and 10 mi (16 km) northeast of Yuma, Ariz.

DRAINAGE AREA.--184,700 mi^2 (478,400 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: July 1972 to September 1973.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
JULY 17...	0745	345	11	20	96	34	160	5.3	189	0	360	140
AUG. 14...	1000	388	12	20	93	35	160	5.9	179	0	360	150
SEP. 15...	0940	252	12	20	92	33	160	5.1	179	0	350	150

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA+MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
JULY 17...	.5	.19	200	908	901	1.23	380	220	3.6	1410	8.0	28.0
AUG. 14...	.5	.18	210	906	905	1.23	380	230	3.6	1410	8.0	29.5
SEP. 15...	.5	.06	210	916	891	1.25	370	220	3.6	1390	8.1	26.0

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)
OCT. 10...	1050	--	11	30	89	34	160	5.5	177
NOV. 02...	0830	--	14	10	96	36	200	5.2	199
DEC. 04...	0855	--	13	9	99	34	180	5.5	199
JAN. 03...	1320	306	12	9	100	35	190	5.4	197
FEB. 02...	0830	284	12	30	100	33	180	5.6	196
MAR. 02...	1100	437	12	40	99	35	200	5.7	206
APR. 06...	1130	495	11	5	92	31	170	5.9	177
MAY 04...	1300	360	10	8	87	32	150	5.2	182
JUNE 01...	1110	220	12	5	98	34	170	5.2	192
JULY 06...	1150	366	11	0	94	33	160	5.2	175
AUG. 03...	0125	355	11	30	90	32	150	5.1	179
SEP. 07...	1035	318	13	70	93	32	160	5.8	180

09429600 COLORADO RIVER BELOW LAGUNA DAM, ARIZ.-CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS. SOLVED NITRATE (NO3) (MG/L)	DIS. SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT. 10...	0	370	150	.8	--	--	.17	220	920
NOV. 02...	0	400	200	.8	--	--	.13	250	1050
DEC. 04...	0	390	160	.6	1.0	.0	.22	240	968
JAN. 03...	0	360	180	.6	1.1	.0	.25	250	1010
FEB. 02...	0	370	180	.6	.90	.0	.20	230	1010
MAR. 02...	0	410	200	1.1	.70	.0	.16	280	1010
APR. 06...	0	350	180	.7	.80	.0	.18	250	906
MAY 04...	0	340	140	.4	.60	.0	.13	200	888
JUNE 01...	0	380	160	.6	.30	.0	.06	190	960
JULY 06...	0	360	130	.6	.40	.0	.10	200	846
AUG. 03...	0	370	140	.5	.40	.0	.09	180	852
SEP. 07...	0	360	150	.6	.90	.0	.20	250	828

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 10...	908	1.25	360	220	3.7	1440	8.1	24.0
NOV. 02...	1050	1.43	390	220	4.4	1630	8.1	15.0
DEC. 04...	982	1.32	390	220	4.0	1500	8.0	13.5
JAN. 03...	982	1.37	390	230	4.2	1550	8.1	10.5
FEB. 02...	980	1.37	390	220	4.0	1540	8.2	11.0
MAR. 02...	1060	1.37	380	210	4.4	1640	8.1	18.0
APR. 06...	930	1.23	360	210	3.9	1450	8.1	18.0
MAY 04...	856	1.21	350	200	3.5	1360	8.1	25.5
JUNE 01...	955	1.31	380	230	3.8	1450	7.9	29.0
JULY 06...	861	1.15	370	230	3.2	1320	8.1	29.0
AUG. 03...	887	1.16	360	210	3.5	1330	8.1	30.0
SEP. 07...	904	1.12	360	220	3.7	1300	8.3	28.0

09429490 COLORADO RIVER ABOVE GILA RIVER, NEAR YUMA, ARIZ.

LOCATION.--Lat 32°43'22", long 114°32'40", in SE¼NE¼ sec.19, T.8 S., R.22 W., Yuma County, on left bank, 0.6 mi (1.0 km) upstream from Gila River, 5 mi (8 km) east of Yuma, 6 mi (10 km) downstream from Laguna Dam, 12 mi (19 km) upstream from northerly international boundary, and 14 mi (22 km) downstream from Imperial Dam.

DRAINAGE AREA.--185,000 mi² (479,000 km²), approximately.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OCT.									
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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NOV.									
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DEC.									
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JAN.									
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FEB.									
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MAR.									
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APR.									
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MAY									
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JUNE									
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JULY									
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AUG.									
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SEP.									
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09429690 COLORADO RIVER ABOVE GILA RIVER, NEAR YUMA, ARIZ.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1961-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
02...	0	400	160	.6	--	--	.12	260	1040
13...	0	445	195	--	--	--	--	--	1180
16...	0	435	195	--	--	--	--	--	1160
26...	0	455	205	--	--	--	--	--	1180
30...	0	455	262	--	--	--	--	--	1290
NOV.									
06...	0	430	210	.6	.70	.0	.16	280	1100
13...	0	405	175	--	--	--	--	--	1010
20...	0	405	170	--	--	--	--	--	1040
27...	0	440	212	--	--	--	--	--	1200
DEC.									
04...	0	430	190	.6	.90	.0	.21	260	1080
11...	0	410	190	--	--	--	--	--	1090
18...	0	405	170	--	--	--	--	--	1050
27...	0	415	190	--	--	--	--	--	1130
JAN.									
03...	0	400	200	.7	1.0	.0	.23	270	1120
08...	0	410	185	--	--	--	--	--	1090
15...	0	410	175	--	--	--	--	--	1050
22...	0	415	180	--	--	--	--	--	1070
29...	0	415	200	--	--	--	--	--	1130
FEB.									
05...	0	400	190	.7	1.1	.0	.25	290	1100
12...	0	410	195	--	--	--	--	--	1100
20...	0	415	195	--	--	--	--	--	1120
26...	0	405	165	--	--	--	--	--	1010
MAR.									
05...	0	410	190	.8	.90	.0	.20	250	976
12...	0	375	150	--	--	--	--	--	960
19...	0	410	210	--	--	--	--	--	1120
26...	0	375	155	--	--	--	--	--	972
APR.									
02...	0	370	150	.6	1.2	.0	.26	180	958
09...	0	375	160	--	--	--	--	--	974
16...	0	370	155	--	--	--	--	--	962
23...	0	400	170	--	--	--	--	--	1080
MAY									
03...	0	410	160	.5	.80	.0	.18	230	1010
08...	0	385	150	--	--	--	--	--	998
14...	0	410	185	--	--	--	--	--	1100
21...	0	400	178	--	--	--	--	--	1060
29...	0	415	185	--	--	--	--	--	1120
JUNE									
04...	0	420	180	.6	.10	.0	.03	230	1050
11...	0	380	155	--	--	--	--	--	976
18...	0	395	170	--	--	--	--	--	1050
25...	0	380	150	--	--	--	--	--	956
JULY									
02...	0	440	180	.7	.50	.1	.14	260	1070
09...	0	385	152	.4	--	--	--	--	954
16...	0	385	155	.5	--	--	--	--	968
23...	0	380	152	.4	--	--	--	--	942
30...	0	380	150	.6	--	--	--	--	942
AUG.									
06...	0	360	160	.5	.20	.0	.06	230	976
13...	0	385	155	.7	--	--	--	--	984
20...	0	375	148	.5	--	--	--	--	960
27...	0	385	152	.6	--	--	--	--	978
SEP.									
04...	0	410	170	.5	--	--	.10	250	1050
19...	0	420	160	.5	.22	.0	.05	230	1020
24...	0	370	170	.6	.35	.0	.08	200	1010

09429690 COLORADO RIVER ABOVE GILA RIVER, NEAR YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
02...	1010	1.41	420	250	3.8	1570	8.1	25.0
13...	1150	1.60	475	280	--	1800	8.0	--
16...	1130	1.54	465	270	--	1770	8.1	--
26...	1180	1.60	470	270	--	1830	8.0	--
30...	1280	1.75	485	280	--	2010	8.1	--
NOV.								
06...	1150	1.50	460	270	4.3	1770	7.7	17.0
13...	1040	1.37	430	250	4.0	1620	8.1	--
20...	1030	1.41	420	250	4.0	1600	8.1	--
27...	1180	1.63	460	260	4.7	1840	8.1	--
DEC.								
04...	1100	1.47	430	250	4.2	1660	7.9	15.0
11...	1080	1.48	445	262	4.1	1690	8.0	--
18...	1040	1.43	440	260	3.8	1630	8.1	--
27...	1090	1.54	450	260	4.1	1710	8.1	--
JAN.								
03...	1090	1.52	430	240	4.4	1710	8.1	14.0
08...	1060	1.48	440	261	3.9	1660	8.0	--
15...	1040	1.43	430	256	3.9	1640	8.1	--
22...	1070	1.46	440	256	3.9	1660	8.1	--
29...	1100	1.54	445	262	4.2	1730	8.0	11.5
FEB.								
05...	1070	1.50	430	240	4.2	1690	8.0	14.5
12...	1090	1.50	445	264	4.1	1700	8.1	--
20...	1090	1.52	440	253	4.2	1730	8.1	--
26...	1020	1.37	420	246	3.8	1580	8.1	17.5
MAR.								
05...	1080	1.33	430	240	4.2	1640	8.0	15.5
12...	941	1.31	390	220	3.8	1480	8.0	--
19...	1110	1.52	430	248	4.5	1750	8.2	--
26...	961	1.32	405	234	3.7	1500	8.1	--
APR.								
02...	936	1.30	390	220	3.5	1440	8.0	15.0
09...	968	1.32	405	234	3.7	1520	8.1	--
16...	956	1.31	415	241	3.5	1510	8.1	19.0
23...	1030	1.47	425	246	3.9	1600	8.0	--
MAY								
03...	1010	1.37	430	260	3.6	1510	8.1	--
08...	961	1.36	410	241	3.5	1500	8.1	--
14...	1070	1.50	440	256	4.0	1680	8.1	--
21...	1040	1.44	430	251	3.9	1620	8.2	--
29...	1090	1.52	450	256	4.0	1690	8.0	--
JUNE								
04...	1060	1.43	430	250	4.0	1590	8.0	25.5
11...	962	1.33	405	241	3.7	1520	8.1	--
18...	1020	1.43	420	238	3.9	1570	8.1	--
25...	975	1.30	395	238	3.6	1480	8.1	--
JULY								
02...	1090	1.46	430	250	4.0	1630	7.9	29.5
09...	961	1.30	410	241	3.7	1520	8.1	--
16...	971	1.32	410	242	3.6	1520	8.0	--
23...	953	1.28	400	234	3.7	1490	8.0	--
30...	953	1.28	395	238	3.7	1480	8.0	--
AUG.								
06...	944	1.33	400	230	3.7	1510	7.9	28.5
13...	968	1.34	410	244	3.7	1520	8.1	--
20...	941	1.31	395	232	3.6	1470	8.1	--
27...	968	1.33	410	242	3.7	1500	8.1	--
SEP.								
04...	1050	1.43	430	260	4.0	1600	8.0	28.0
19...	1010	1.39	400	230	3.9	1500	8.0	28.0
24...	1010	1.37	430	240	4.0	1610	7.9	25.0

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.

LOCATION.--Lat 32°52'06", long 109°30'38", in SE¼NE¼ sec.31, T.6 S., R.28 E., Graham County, at gaging station 0.6 mi (1.0 km) downstream from intake of Brown Canal, 8 mi (13 km) northeast of Solomon, and 17 mi (27 km) downstream from San Francisco River.

DRAINAGE AREA.--7,896 mi^2 (20,451 km^2).

PERIOD OF RECORD.--Specific conductance: January 1965 to September 1973.
Water temperatures: January 1965 to September 1973.
Sediment records: February 1965 to September 1973.

EXTREMES.--1972-73.
Specific conductance: Maximum daily, 1,600 micromhos Sept. 25-27; minimum daily, 260 micromhos May 15-17.
Water temperatures: Maximum 35.0°C Aug. 18; minimum, 1.5°C Jan. 8.
Sediment concentrations: Maximum daily, 75,000 mg/l Oct. 20; minimum daily, 18 mg/l July 4.
Sediment discharge: Maximum daily, 9,130,000 tons Oct. 20; minimum daily, 3.7 tons Sept. 29.

Period of record:
Specific conductance (1967-73): Maximum daily, 2,200 micromhos July 12, 1972; minimum daily, 260 micromhos Feb. 15, 28, 29, Apr. 4, 1968, May 15-17, 1973.

Water temperatures (1967-73): Maximum, 35.0°C Aug. 18, 1973; minimum, 1.5°C, Jan. 8, 1973.
Sediment concentrations: Maximum daily, 75,000 mg/l Oct. 20, 1972; minimum daily, 4 mg/l May 22, 29, 1971.
Sediment discharge: Maximum daily, 9,130,000 tons Oct. 20, 1972; minimum daily, 0.50 ton May 29, 1971.

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	500	770	400	780	350	330	280	550	1150	800	1200
2	990	510	770	440	780	340	320	300	550	1150	600	1200
3	1000	510	770	460	780	320	330	330	500	1150	620	1200
4	990	520	790	---	780	340	330	330	600	1200	580	1200
5	520	520	750	520	780	350	340	290	550	1190	700	1250
6	450	620	790	550	790	350	350	290	600	1200	800	1400
7	350	650	790	560	790	360	370	280	600	1200	850	1410
8	390	700	790	600	790	360	360	280	750	910	900	1410
9	460	700	790	600	700	370	350	310	800	1000	950	1410
10	580	700	790	600	510	370	340	310	700	1000	1000	1400
11	650	700	790	650	510	400	320	300	750	950	1050	1400
12	710	650	790	650	540	400	300	300	750	---	1050	1500
13	760	650	810	650	510	400	300	300	750	700	1100	1200
14	500	650	810	690	510	360	300	280	550	1000	1100	1250
15	510	720	810	700	510	360	280	260	650	720	1100	1380
16	550	700	810	650	510	360	270	260	750	590	1200	1400
17	---	700	850	680	510	350	270	260	600	590	1200	1400
18	---	700	850	680	510	350	280	280	600	600	1200	1410
19	---	700	850	650	460	340	280	300	700	600	1200	1410
20	---	690	890	650	460	300	350	310	700	600	1200	1410
21	---	690	880	680	450	300	350	330	900	700	1150	1400
22	---	700	900	680	300	300	350	350	800	710	810	1400
23	---	710	900	680	300	300	350	360	1000	890	810	1500
24	---	710	900	680	300	310	340	360	900	890	910	1550
25	450	710	890	680	320	350	340	400	980	900	1000	1600
26	450	710	890	700	350	350	310	420	1000	1000	1020	1600
27	440	800	900	700	360	340	290	450	1090	1000	1050	1600
28	440	750	850	710	360	340	280	470	1010	800	1100	1500
29	440	750	460	720	---	330	280	450	1010	990	1180	1500
30	500	750	360	780	---	300	280	470	1100	810	1180	1550
31	500	---	340	800	---	330	---	500	---	860	1180	---
MEAN	---	669	785	640	545	345	318	336	760	902	987	1400
YEAR	MAX	1600	MIN	260	MEAN	692						

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	11.0	10.0	7.0	10.0	12.5	14.0	16.0	19.0	30.5	31.0	29.0
2	24.0	10.0	10.0	5.0	9.5	14.0	13.0	17.0	24.0	30.0	28.0	28.0
3	20.0	14.0	11.0	3.0	9.5	14.0	12.0	17.0	26.0	26.0	29.0	31.0
4	20.0	14.0	11.0	---	9.5	15.0	12.0	17.5	25.0	28.0	28.0	31.0
5	20.0	14.5	10.0	3.0	9.5	14.0	---	17.0	28.0	28.5	29.0	30.0
6	21.0	15.0	9.0	2.0	11.0	12.0	---	15.0	28.0	31.0	28.0	27.0
7	21.0	15.0	9.0	2.0	11.0	11.5	---	17.0	28.0	33.0	27.0	29.0
8	22.0	15.0	9.5	1.5	11.0	11.0	---	16.0	29.5	30.0	24.0	30.0
9	22.0	14.0	10.0	7.5	10.0	10.5	14.0	20.0	28.0	29.0	24.0	28.0
10	22.0	13.5	9.0	8.0	7.0	12.0	15.5	18.5	28.5	30.0	25.0	29.0
11	24.0	13.0	9.0	9.5	8.0	11.0	16.0	21.0	27.0	30.0	29.0	21.0
12	22.0	11.0	9.0	7.0	8.5	12.5	17.0	19.0	24.5	---	29.0	25.0
13	21.0	9.0	9.0	7.0	8.5	10.0	17.0	19.0	22.0	26.0	25.0	25.0
14	23.5	9.0	9.0	10.0	9.5	8.5	14.0	19.5	20.0	30.0	27.0	26.0
15	23.0	11.0	8.0	10.0	10.0	12.0	13.0	20.0	27.0	25.0	26.0	26.0
16	23.0	12.0	6.0	10.5	9.5	13.0	11.0	20.0	28.0	25.0	27.0	26.0
17	23.0	12.0	7.5	11.0	9.0	14.0	15.0	21.0	28.0	28.0	23.5	28.0
18	---	13.0	7.0	10.0	11.0	11.0	14.0	21.0	28.0	28.5	35.0	27.0
19	---	11.5	10.0	10.0	11.0	11.0	13.0	22.0	28.0	29.0	25.0	26.0
20	---	10.0	7.0	9.0	10.5	13.0	13.0	21.5	27.0	30.0	31.0	25.0
21	---	9.0	10.0	8.0	9.5	13.0	15.5	24.0	22.5	28.0	31.0	28.0
22	---	10.0	10.0	6.5	6.5	12.0	16.0	19.5	25.0	24.0	30.0	28.0
23	---	8.0	11.0	8.5	6.5	10.0	17.5	20.0	26.0	26.0	29.0	26.0
24	---	12.0	7.0	9.0	10.5	12.0	14.0	20.0	23.0	22.0	31.5	25.0
25	19.0	12.0	7.0	9.0	9.0	12.0	16.5	19.0	29.0	29.0	30.0	22.0
26	15.0	11.0	10.0	6.0	14.0	13.0	14.0	22.0	29.0	28.5	32.0	23.0
27	15.0	12.0	9.5	10.0	14.0	13.0	19.0	21.0	29.5	26.0	30.0	24.0
28	16.0	12.0	11.0	8.0	13.0	10.0	18.0	19.0	30.0	24.0	30.0	24.0
29	17.0	11.0	7.0	7.0	---	10.0	15.0	23.0	32.0	30.0	29.0	24.0
30	16.0	10.0	6.0	7.5	---	9.5	14.0	25.0	28.5	29.0	29.0	25.0
31	12.0	---	6.0	8.0	---	12.5	---	20.0	---	26.5	23.0	---
MEAN	---	12.0	9.0	7.5	10.0	12.0	14.5	19.5	26.5	28.0	28.0	26.5
YEAR	MAX	35.0	MIN	1.5	MEAN	18.0						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	167	176	79	1370	760	2810	462	194	242
2	170	202	93	1310	640	2260	445	271	326
3	175	177	84	1280	690	2380	429	268	310
4	178	221	106	1230	750	2490	420	319	362
5	1070	13700	53700	1210	860	2810	410	469	519
6	1110	9020	31500	1110	600	1800	396	207	221
7	2930	20100	174000	1040	460	1290	386	198	206
8	1400	7450	29000	952	320	823	377	160	163
9	886	5800	13900	896	350	847	364	126	124
10	686	3500	6480	845	350	799	369	120	120
11	567	1400	2140	817	340	750	377	149	152
12	489	1000	1320	796	560	1200	369	146	145
13	955	1700	4990	761	600	1230	369	151	150
14	886	5500	13200	726	510	1000	360	107	104
15	745	3800	7640	670	450	814	347	136	127
16	679	1900	3480	658	410	728	343	116	107
17	574	1300	2010	616	450	748	339	159	146
18	701	3000	5680	622	480	806	335	138	125
19	13100	50000	1770000	628	460	780	327	75	66
20	45100	75000	9130000	622	290	487	315	90	77
21	24300	25000	1640000	604	300	489	311	125	105
22	16600	15000	672000	592	290	464	311	119	100
23	8880	10000	240000	586	400	633	307	129	107
24	4140	7000	78200	580	370	579	307	480	398
25	3040	5000	41000	574	320	496	315	120	102
26	2540	3300	22600	532	250	359	315	118	100
27	2700	3400	24800	526	200	284	292	88	69
28	2570	2900	20100	490	280	370	331	110	98
29	2200	1800	10700	473	347	443	4320	9180	134000
30	1920	1160	6010	468	333	421	3900	4750	50000
31	1520	890	3650	--	--	--	2670	4200	30300
TOTAL	142978	--	14008462	23584	--	31390	20918	--	219171

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1840	2400	11900	389	129	135	2860	2550	19700
2	1650	1210	5390	370	169	169	3620	3500	34200
3	1330	1300	4670	378	199	203	3920	2900	30700
4	1080	1350	3940	374	266	269	3820	1500	15500
5	944	1100	2800	370	253	253	3600	1950	19000
6	880	900	2140	365	154	152	2670	2250	16200
7	810	670	1470	375	370	374	2150	1750	10200
8	740	530	1060	406	310	340	1980	1900	10200
9	670	590	1070	536	390	564	1920	1700	8810
10	634	650	1110	835	1260	2840	1860	4000	20100
11	613	460	761	870	1100	2580	1840	1300	6460
12	570	340	523	855	910	2100	1810	900	4400
13	542	350	512	910	1030	2530	1860	1900	9540
14	500	275	371	993	1500	4020	2100	1200	6800
15	477	201	259	953	1070	2750	2130	1850	10600
16	477	236	304	960	1010	2620	2210	2200	13100
17	462	230	299	1070	1140	3290	2880	2300	17900
18	499	252	340	1090	1020	3000	3160	2500	21300
19	547	233	344	1140	960	2950	3300	2100	18700
20	565	300	458	1160	1260	3950	3300	2700	24100
21	547	261	385	1660	2180	12700	3320	3000	26900
22	523	274	387	7000	11000	212000	3690	3050	30400
23	499	230	310	6000	11300	181000	3740	2500	25200
24	499	240	323	6340	8080	138000	3140	1650	14000
25	469	224	284	4680	6850	86600	2590	1500	10500
26	444	308	369	3300	5050	45000	2310	1550	9670
27	433	155	181	2720	4250	31200	2240	1650	9980
28	419	164	186	2700	3300	24100	2350	1700	10800
29	400	159	172	--	--	--	2470	1500	10000
30	394	140	149	--	--	--	2770	1500	11200
31	408	148	163	--	--	--	2730	1200	8850
TOTAL	20885	--	42630	48799	--	765689	84340	--	485010

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2550	1500	10300	2630	2600	18500	826	521	1160
2	2650	1650	11800	2320	1450	9080	816	562	1240
3	2710	1500	11000	1950	1700	8950	774	281	587
4	2410	1350	8780	1860	1550	7780	711	1720	3300
5	2260	1150	7020	1970	2000	10600	652	258	454
6	2050	900	4980	2440	2100	13800	598	188	304
7	1950	800	4210	2800	2400	18100	550	265	394
8	2190	900	5320	2360	2300	14700	501	221	299
9	2350	1200	7610	2290	1650	10200	446	73	88
10	2380	1250	8030	2100	1700	9640	397	126	135
11	2540	1600	11000	2090	1850	10400	355	147	141
12	2940	2100	16700	2200	1650	9800	326	208	183
13	3320	3600	32300	2230	1150	6920	346	191	178
14	3980	5050	54300	2360	1500	9560	583	6090	10800
15	4960	6050	81000	3320	3700	33200	430	900	1040
16	5160	4950	69000	3990	4400	47400	387	390	408
17	3950	3250	34700	3300	3320	29600	340	195	179
18	2920	2850	22500	2600	2250	15800	306	175	145
19	2950	2900	23100	2130	1550	8910	287	158	122
20	2710	2200	16100	2060	1450	8060	259	104	73
21	2290	1550	9580	1960	1700	9000	232	130	81
22	1980	1300	6950	1770	1200	5730	219	126	75
23	1900	1150	5900	1560	2300	9690	197	67	36
24	2050	1300	7200	1460	1500	5910	178	63	30
25	2130	1350	7760	1340	1250	4520	178	48	23
26	2400	1800	11700	1240	1250	4180	170	44	20
27	2640	2900	20700	1140	1000	3080	162	46	20
28	2760	3400	25300	1050	950	2690	153	49	20
29	3080	3550	29500	962	800	2080	136	48	18
30	3090	4550	38000	862	1150	2680	124	37	12
31	--	--	--	826	476	1060	--	--	--
TOTAL	83250	--	602340	63170	--	351620	11639	--	21565

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	117	108	34	330	1490	1330	87	34	8.0
2	109	79	23	402	10100	11600	83	35	7.8
3	101	21	5.7	386	8690	9790	83	47	11
4	89	18	4.3	487	14800	19800	83	32	7.2
5	101	32	8.7	345	9300	8660	76	29	6.0
6	95	57	15	308	2600	2160	73	35	6.9
7	96	54	14	246	900	598	69	25	4.7
8	231	597	401	221	660	394	66	32	5.7
9	147	560	222	192	410	213	68	32	5.9
10	140	360	136	254	498	468	70	31	5.9
11	150	310	126	148	470	188	68	37	6.8
12	252	6050	7520	146	300	118	84	66	15
13	241	15000	10100	138	270	101	115	498	155
14	198	3810	2110	141	187	71	104	499	140
15	246	2800	1860	129	281	98	88	154	37
16	413	8360	11800	122	212	70	77	94	20
17	647	16700	30800	120	194	63	80	75	16
18	576	9500	14800	112	118	36	80	52	11
19	546	5600	8260	97	114	30	73	78	15
20	534	4100	5910	116	168	53	74	74	15
21	451	1700	2070	115	200	62	72	36	7.0
22	362	1100	1080	249	1040	734	72	52	10
23	293	1000	791	236	1300	828	66	44	7.8
24	242	500	327	171	590	272	60	45	7.3
25	207	261	146	139	200	75	58	40	6.3
26	188	324	164	120	120	39	62	35	5.9
27	197	375	199	108	134	39	66	41	7.3
28	267	1890	1360	97	109	29	66	30	5.3
29	193	1850	964	95	69	18	66	21	3.7
30	228	1690	1040	95	50	13	63	49	8.3
31	282	1700	1290	87	79	19	--	--	--
TOTAL	7939	--	103580.7	5952	--	57969	2252	--	568.8

TOTAL DISCHARGE FOR YEAR (CFS-DAYS) 515706
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS) 16689995.5

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
MAY												
16...	1630	20.0	3680	4470	44400	22	29	50	80	93	98	100
JULY												
16...	1720	25.0	640	15500	26800	41	57	78	97	99	100	--
AUG.												
14...	1730	28.0	58	4900	2330	44	64	87	97	97	100	--

09460200 FRYE CREEK AT THATCHER, ARIZ.

LOCATION.--Lat 32°50'00", long 109°45'39", in SW¼ sec.11, T.7 S., R.25 E., Graham County, at gaging station 1,300 ft (400 m) downstream from Frye Creek detention dam, and 1 mi (2 km) south of Thatcher.

DRAINAGE AREA.--24.3 mi² (62.9 km²).

PERIOD OF RECORD.--Sediment records: March 1963 to September 1973.

REMARKS.--This station is operated in conjunction with a trap efficiency study of the Frye Creek detention reservoir. Results are published by flow event, as opposed to the normal procedure of reporting daily values.

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
(WHERE NO MEAN CONCENTRATIONS ARE SHOWN, LOADS ARE COMPUTED FROM DISCHARGE-SEDIMENT LOAD CURVES)

DATE	FLOW EVENT NO.	OUTFLOW DURATION 1/ (HOURS)	TOTAL OUTFLOW 2/ (ACRE-FEET)	MEAN DISCHARGE FOR PERIOD (CFS)	MEAN CONCENTRATION (MG/L)	OUTFLOW SEDIMENT LOAD (TONS)
OCT. 6-8, 1972	95	46	28	7.4	1,100	364
OCT. 19-23	96	90.5	49	6.6	785	86
FEB. 21-24, 1973	97	77.5	26	3.6	360	21
MAR. 21-24	98	72	3.2	.54	81	.36
MAY 5-24	99	441	106	3.0	--	31
JULY 6-7	100	22	6.4	3.5	590	10
JULY 14-15	101	25.5	8.8	4.2	725	15

1/ Duration of event is based on time when flow is more than 0.2 cfs.
2/ Excluding outflow less than 0.2 cfs.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
(ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM
OCT.							
06...	1515	23.0	149	15600	6280	33	48
19...	1700	18.0	4.0	218	2.4	46	60
FEB.							
22...	1400	7.0	8.2	395	8.7	64	74

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM
OCT.							
06...	79	--	99	--	100	--	--
19...	89	99	--	100	--	--	--
FEB.							
22...	77	88	--	95	--	99	100

09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.

LOCATION.--Lat 31°37'33", long 110°10'26", in NE¼NE¼ sec.11, T.21 S., R.21 E., Cochise County, at gaging station in Spanish land grant of San Juan de las Boquillas y Nogales, at county highway bridge, 0.3 mi (0.5 km) south of Charleston, 1.5 mi (2.4 km) upstream from Charleston damsite, and 9 mi (14 km) upstream from Babocomari River.

DRAINAGE AREA.--1,219 mi^2 (3,157 km^2), of which 696 mi^2 (1,803 km^2) is in Mexico.

PERIOD OF RECORD.--Specific conductance: October 1964 to September 1973.
Water temperatures: July 1963 to September 1973.
Sediment records: July 1963 to September 1973.

EXTREMES.--1972-73.
Specific conductance: Maximum daily, 620 micromhos Mar. 21; minimum daily, 190 micromhos July 15.
Water temperatures: Maximum, 32.5°C Aug. 22; minimum, 0.5°C Jan. 24.
Sediment concentrations: Maximum daily, 15,000 mg/l July 14; minimum daily, 2.0 mg/l June 22.
Sediment discharge: Maximum daily, 32,500 tons Oct. 19; minimum daily, 0.01 ton June 22.

Period of record:
Specific conductance: Maximum daily, 1,550 micromhos Dec. 22, 1967; minimum daily, 140 micromhos Mar. 18, 1969.
Water temperatures: Maximum, 36.0°C July 12, 1968; minimum, freezing point on several days during 1964-68, 1970, 1971.
Sediment concentrations: Maximum daily, 30,600 mg/l July 29, 1966; minimum daily, 1.0 mg/l May 27, 28, 31, June 1, 2, 1966, Oct. 23, 24, Nov. 2, 12, 1969.
Sediment discharge: Maximum daily, 410,000 tons Aug. 14, 1964; minimum daily, 0.01 ton July 3, 6, 7, 1969, July 10, 1971, June 22, 1973.

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	350	450	450	360	430	360	350	360	360	350	380	350
2	350	460	450	360	430	360	350	360	360	390	360	370
3	370	460	450	360	360	360	350	360	360	390	370	340
4	330	320	440	360	400	360	370	360	360	350	360	350
5	300	350	460	360	360	360	370	400	360	370	350	350
6	320	360	460	360	360	390	400	350	350	380	350	360
7	370	370	440	360	360	360	---	360	350	220	340	330
8	400	---	450	350	360	360	---	360	360	350	340	400
9	---	370	460	350	360	360	---	400	340	370	340	360
10	360	370	410	350	370	360	370	370	350	310	370	370
11	390	360	460	350	430	360	400	400	350	220	245	340
12	380	450	440	350	360	360	360	360	350	300	280	360
13	400	450	400	350	450	360	360	360	340	370	380	360
14	360	450	400	350	360	520	350	360	350	295	320	370
15	410	390	400	350	410	360	370	360	350	190	360	360
16	440	410	500	350	410	400	360	360	350	575	380	370
17	440	---	340	350	450	390	350	600	350	420	390	370
18	360	460	350	350	360	400	360	350	360	350	350	410
19	285	450	350	370	360	400	360	400	350	350	380	400
20	270	410	350	380	360	400	360	370	370	370	380	400
21	280	380	350	360	360	620	360	370	370	370	380	320
22	430	390	380	350	445	500	360	370	370	360	400	400
23	400	---	360	350	380	400	360	360	360	420	270	400
24	390	440	360	350	460	---	340	360	360	420	300	410
25	430	450	360	330	360	---	350	370	380	370	340	320
26	480	400	360	350	360	400	350	360	350	350	375	320
27	430	455	360	400	450	390	400	360	350	350	370	---
28	---	460	390	380	400	350	350	360	350	350	390	360
29	450	450	370	360	---	360	360	350	350	300	300	350
30	400	410	360	360	---	360	360	360	370	500	290	350
31	440	---	---	360	---	350	---	370	---	370	380	---
MEAN	380	414	404	357	391	390	362	374	356	357	349	364
YEAR	MAX	620	MIN	190	MEAN	374						

09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	14.0	14.0	1.5	15.0	17.5	9.0	12.0	15.5	20.0	23.0	16.0
2	18.5	17.0	15.0	3.5	12.0	12.5	6.0	9.5	17.0	25.0	20.5	19.5
3	14.5	6.5	3.0	2.0	4.0	7.5	8.0	14.0	14.0	21.5	28.0	14.5
4	17.0	8.0	5.5	3.0	7.0	7.0	7.5	11.0	16.5	23.5	18.5	19.0
5	21.0	7.5	6.0	10.5	8.0	8.0	9.0	11.0	13.5	32.5	22.0	16.5
6	18.0	10.0	4.0	5.0	11.0	9.0	21.0	9.0	21.0	32.0	20.0	22.0
7	19.0	17.5	8.0	5.0	8.0	5.0	---	15.5	25.0	19.0	24.0	16.0
8	16.0	---	12.0	4.5	8.0	9.0	---	11.5	26.0	24.0	20.0	19.5
9	---	17.0	6.5	6.0	6.5	10.0	---	15.5	17.0	21.0	22.0	15.5
10	14.0	15.5	7.0	5.5	6.0	8.0	22.0	31.0	21.0	23.0	19.0	22.5
11	24.0	7.5	5.0	9.0	10.0	5.5	23.0	29.5	17.0	20.0	23.0	15.0
12	24.0	9.0	3.0	12.0	6.0	9.0	22.0	12.5	21.0	23.0	20.0	24.0
13	23.5	5.5	3.0	13.0	6.0	6.0	19.0	19.0	18.0	20.0	21.5	23.5
14	14.0	9.5	4.0	2.0	8.0	9.5	9.0	13.0	20.0	22.0	19.5	26.0
15	15.5	7.0	3.0	4.0	12.0	11.0	9.0	18.0	16.5	19.0	22.0	15.0
16	14.0	7.0	4.0	3.5	14.0	11.5	9.5	14.0	18.0	27.0	27.0	22.0
17	17.5	---	3.0	9.0	7.0	7.5	12.0	16.0	15.0	---	30.0	16.5
18	16.0	14.0	5.5	13.5	5.0	10.0	10.0	13.0	19.5	23.5	18.0	21.5
19	17.0	5.5	4.5	14.0	4.0	7.5	18.0	21.0	15.0	29.5	25.5	16.0
20	14.0	6.0	5.5	4.0	8.5	12.0	9.0	15.0	21.0	28.0	19.0	21.0
21	13.0	4.0	10.0	1.0	9.0	9.0	10.5	18.0	21.5	18.5	25.0	15.0
22	10.0	7.5	14.0	4.5	8.0	10.0	8.5	14.0	22.5	19.5	19.5	18.0
23	11.5	---	4.0	9.0	7.5	12.0	13.0	18.0	15.5	17.5	23.5	15.0
24	12.0	8.5	4.0	0.5	8.0	---	10.0	21.0	19.5	20.0	19.0	19.0
25	14.0	5.0	6.0	8.0	5.5	---	21.5	24.0	18.5	17.5	25.0	20.5
26	20.0	5.0	4.5	7.5	17.5	15.0	---	14.0	29.0	22.5	18.5	17.0
27	15.5	11.0	5.5	3.0	7.5	8.0	23.0	19.0	18.0	23.5	28.0	---
28	---	6.0	10.0	2.0	11.5	9.5	12.0	14.0	23.0	22.0	25.0	28.0
29	16.0	5.0	6.5	2.0	---	17.0	14.0	27.0	21.0	18.0	24.0	10.5
30	11.0	5.0	2.0	5.5	---	14.0	11.0	16.0	23.0	21.5	24.5	13.5
31	9.0	---	---	6.5	---	6.0	---	18.0	---	21.0	24.5	---
MEAN	16.0	9.0	6.5	6.0	8.5	10.0	13.5	16.5	19.5	22.5	22.5	18.5
YEAR	MAX	32.5	MIN	0.5	MEAN	14.0						

09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	6.8	54	.99	22	21	1.2	18	96	4.7
2	6.5	14	.24	24	34	2.2	19	20	1.0
3	8.0	27	.58	25	35	2.4	18	59	2.9
4	21	4300	244	22	40	2.4	17	20	.92
5	39	750	790	22	50	3.0	17	43	2.0
6	45	3500	425	21	26	1.5	18	18	.87
7	34	2300	211	21	27	1.5	17	68	3.1
8	23	700	43	22	30	1.8	17	63	2.9
9	19	300	15	22	39	2.3	18	87	4.2
10	16	167	7.2	23	26	1.6	17	93	4.3
11	14	90	3.4	23	62	3.8	18	17	.83
12	13	43	1.5	24	53	3.4	18	62	3.0
13	13	132	4.6	24	37	2.4	19	65	3.3
14	12	76	2.5	24	36	2.3	19	17	.87
15	12	53	1.7	23	24	1.5	18	37	1.8
16	11	50	1.5	24	63	4.1	17	9	.41
17	12	199	16	27	75	5.5	17	19	.87
18	309	12600	14000	26	82	5.8	18	33	1.6
19	689	12700	32500	25	29	2.0	17	23	1.1
20	216	3950	2490	23	37	2.3	17	37	1.7
21	118	3710	1320	22	49	2.9	18	37	1.8
22	53	1000	143	22	31	1.5	19	25	1.3
23	40	546	59	23	33	2.0	19	44	2.3
24	36	223	22	22	35	2.1	18	50	2.4
25	33	170	15	21	36	2.0	17	60	2.8
26	29	133	10	20	38	2.1	16	50	2.2
27	26	72	5.0	19	45	2.3	16	41	1.8
28	25	75	5.1	18	11	.53	17	63	2.9
29	25	78	5.3	17	21	.96	19	89	4.6
30	24	69	4.5	18	36	1.7	19	47	2.4
31	22	45	2.7	--	--	--	18	47	2.3
TOTAL	1950.3	--	52349.81	669	--	71.39	550	--	69.17

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	18	47	2.3	19	32	1.6	33	290	26
2	20	91	4.9	19	7	.36	32	168	15
3	21	54	3.1	18	27	1.3	30	112	9.1
4	20	42	2.3	17	30	1.4	29	108	8.4
5	19	45	2.3	16	19	.82	27	82	6.0
6	20	51	2.8	15	14	.57	27	71	5.2
7	22	42	2.5	15	19	.77	26	65	4.6
8	20	16	.86	15	69	2.8	26	67	4.7
9	21	60	3.4	15	25	1.0	26	54	3.8
10	20	38	2.0	15	64	2.6	25	77	5.2
11	19	35	1.8	15	11	.44	25	47	3.2
12	19	57	2.9	15	30	1.2	27	57	4.2
13	19	52	2.7	16	15	.65	34	58	5.3
14	19	74	3.8	17	21	.96	76	1430	334
15	20	98	5.3	16	22	.95	249	4760	3380
16	21	41	2.3	15	36	1.5	180	2800	1360
17	21	50	2.8	15	18	.73	113	1230	375
18	18	31	1.5	15	57	2.3	90	790	192
19	20	75	4.0	14	38	1.4	73	660	130
20	20	37	2.0	14	68	2.6	90	2300	559
21	19	89	4.6	21	14	.79	76	4000	821
22	18	25	1.2	484	10600	21100	56	1000	151
23	18	18	.87	239	4500	2900	48	480	62
24	18	40	1.9	125	1700	574	40	200	22
25	17	34	1.6	73	900	177	36	200	19
26	17	48	2.2	53	700	100	33	172	15
27	17	25	1.1	40	287	31	32	174	15
28	17	20	.92	36	482	47	31	185	15
29	18	98	4.8	--	--	--	28	171	13
30	18	32	1.6	--	--	--	25	85	5.7
31	19	66	3.4	--	--	--	24	75	4.9
TOTAL	593	--	79.75	1387	--	24955.74	1667	--	7574.3

09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	25	80	5.4	10	42	1.1	5.5	16	.24
2	22	64	3.8	10	36	.97	5.5	31	.46
3	22	108	6.4	10	43	1.2	5.0	14	.19
4	22	86	5.1	10	45	1.2	5.5	27	.40
5	20	69	3.7	11	79	2.3	4.8	18	.23
6	20	64	3.5	10	19	.51	5.0	30	.40
7	20	65	3.5	10	38	1.0	4.8	18	.23
8	20	70	3.8	10	30	.81	4.5	7	.08
9	20	75	4.0	9.5	43	1.1	3.8	40	.41
10	20	80	4.3	9.0	14	.34	3.6	19	.18
11	18	33	1.6	8.5	50	1.1	3.0	16	.13
12	18	30	1.5	7.5	19	.38	5.9	10	.16
13	15	34	1.4	7.5	21	.42	10	17	.46
14	13	34	1.2	7.5	16	.32	7.9	15	.32
15	15	49	2.0	7.0	22	.42	5.9	13	.21
16	15	39	1.6	6.6	42	.75	4.8	10	.13
17	13	45	1.6	40	1620	261	4.2	8	.09
18	12	19	.62	30	1590	129	3.8	8	.08
19	11	34	1.0	22	250	15	3.4	7	.06
20	11	38	1.1	13	140	4.9	3.2	11	.09
21	12	68	2.2	12	65	2.1	2.5	18	.12
22	12	45	1.4	11	66	2.0	2.5	2	.01
23	11	39	1.2	11	60	1.8	2.8	5	.04
24	10	48	1.3	9.5	97	2.5	2.5	8	.05
25	10	30	.81	8.5	32	.73	3.0	10	.08
26	10	42	1.1	7.5	51	1.0	3.8	5	.05
27	10	43	1.2	7.0	37	.70	2.5	5	.03
28	10	45	1.2	7.0	37	.70	1.5	9	.04
29	10	49	1.3	6.6	41	.73	1.8	18	.09
30	11	23	.68	5.9	41	.65	2.0	4	.02
31	--	--	--	5.5	35	.52	--	--	--
TOTAL	458	--	69.51	340.6	--	437.25	125.0	--	5.08

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.5	3	.02	32	2880	266	18	220	11
2	1.5	9	.04	34	3480	382	9.5	110	2.8
3	1.7	4	.02	20	1700	92	5.9	103	1.6
4	1.4	11	.04	15	500	20	4.8	98	1.3
5	14	194	41	12	106	3.4	3.4	37	.34
6	1.5	36	.15	11	90	2.7	2.3	24	.15
7	100	3780	1130	8.5	100	2.3	2.0	32	.17
8	18	2950	143	7.5	105	2.1	1.7	20	.09
9	6.2	270	4.5	4.2	53	.60	1.7	18	.08
10	51	3320	1390	2.2	50	.30	1.7	31	.14
11	56	3150	747	269	8550	10500	1.5	21	.08
12	40	2570	552	50	1100	148	1.3	10	.04
13	24	900	58	24	396	26	1.4	6	.02
14	150	15000	7550	20	149	8.0	1.4	10	.04
15	574	6480	14900	14	78	2.9	1.4	13	.05
16	200	2500	2120	10	40	1.1	2.8	19	.14
17	35	900	85	7.5	22	.44	3.0	19	.15
18	27	817	107	5.0	16	.22	1.8	10	.05
19	15	400	16	4.2	23	.26	1.7	12	.06
20	12	81	2.6	7.2	562	21	1.8	13	.06
21	9.5	60	1.5	24	508	224	38	2150	220
22	8.0	40	.86	33	1930	449	9.5	137	3.5
23	7.0	20	.38	50	2660	708	5.0	62	.83
24	5.0	14	.19	25	900	61	3.4	37	.34
25	4.5	18	.22	12	158	5.1	1.7	36	.16
26	4.2	17	.19	8.5	64	1.5	1.8	43	.21
27	11	618	56	5.0	33	.44	1.7	35	.16
28	42	1650	1830	3.8	21	.21	1.7	29	.13
29	117	14600	4900	12	296	62	1.7	25	.11
30	78	13200	2840	60	2960	480	1.5	23	.09
31	46	9200	1140	30	1120	91	--	--	--
TOTAL	1663.0	--	39615.71	820.6	--	13561.57	135.1	--	243.89

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	10358.6
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	139033.17

09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
FEB.												
22...	1210	8.0	906	19000	46500	38	47	63	81	88	96	100
JULY												
14...	0930	22.0	134	19200	6950	61	71	92	98	99	100	--
SEP.												
21...	0715	15.0	34	3630	333	69	91	98	100	--	--	--

09471800 SAN PEDRO RIVER NEAR BENSON, ARIZ.

LOCATION.--Lat 32°07'35", long 110°17'22", in SW¼ sec.15, T.15 S., R.20 E., Cochise County, at gaging station 6 mi (10 km) downstream from Tres Alamos Wash, and 11 mi (18 km) north of Benson.

DRAINAGE AREA.--2,500 mi² (6,475 km²), of which 696 mi² (1,803 km²) is in Mexico.

PERIOD OF RECORD.--Sediment records: March 1966 to September 1973.

EXTREMES.--1972-73:
Sediment concentrations: Maximum daily, 45,800 mg/l Oct. 19; minimum daily, no flow on many days.
Sediment discharge: Maximum daily, 138,000 tons Oct. 19; minimum daily, 0 tons on many days.

Period of record:
Sediment concentrations (1968-73): Maximum daily, 78,600 mg/l July 28, 1969; minimum daily, no flow on many days each year.
Sediment discharge (1968-73): Maximum daily, 602,000 tons Aug. 20, 1971; minimum daily, 0 tons on many days each year.

REMARKS.--Records of temperature and specific conductance of individual samples available in district office at Tucson, Ariz.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	15	2220	90	15	2220	90
2	0	0	0	15	2220	90	15	2220	90
3	0	0	0	15	2220	90	15	2220	90
4	20	9260	2760	15	2220	90	13	2310	81
5	19	23200	2220	15	2220	90	13	2280	80
6	85	31800	13700	15	2220	90	12	2000	65
7	24	34600	2240	15	2220	90	12	2000	65
8	8.2	12000	266	15	2220	90	12	2000	65
9	5.3	6200	89	15	2220	90	10	1500	41
10	3.1	5100	43	15	2220	90	9.5	1000	26
11	2.2	4000	40	15	2220	90	8.2	950	21
12	1.9	3000	3.0	15	2220	90	9.5	900	23
13	1.0	1000	2.0	15	2220	90	9.5	900	23
14	1.0	1000	2.0	15	2220	90	5.3	500	7.2
15	.50	500	1.0	20	1850	100	5.3	500	7.2
16	.50	500	1.0	30	2470	200	5.8	550	8.6
17	2.8	1700	57	44	3370	400	6.4	600	10
18	148	17500	14700	36	2570	250	5.8	550	8.6
19	884	45800	138000	36	2570	250	2.8	200	1.5
20	307	23500	22800	36	2570	250	5.3	500	7.2
21	192	13300	6890	36	2570	250	3.9	400	4.2
22	129	7600	2650	40	3470	375	2.2	150	.90
23	90	5500	1340	39	3320	350	.80	100	.20
24	69	6100	1140	35	2640	250	.50	100	.10
25	45	7800	948	30	2470	200	0	0	0
26	44	5000	594	25	2220	150	0	0	0
27	30	2200	178	20	1850	100	.50	100	.10
28	25	2960	200	15	2220	90	2.1	150	.80
29	20	2770	150	15	2220	90	0	0	0
30	20	2770	150	15	2220	90	0	0	0
31	15	2470	100	--	--	--	0	0	0
TOTAL	2192.50	--	211264.0	682	--	4655	200.40	--	816.60

09471800 SAN PEDRO RIVER NEAR BENSON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	39	3350	353
2	0	0	0	0	0	0	37	3350	335
3	0	0	0	0	0	0	33	3300	294
4	0	0	0	0	0	0	31	3400	285
5	0	0	0	0	0	0	29	3350	262
6	0	0	0	0	0	0	31	3300	276
7	0	0	0	0	0	0	33	3150	281
8	0	150	.80	0	0	0	25	3100	209
9	2.1	0	0	0	0	0	22	3100	184
10	0	0	0	0	0	0	20	3000	162
11	0	0	0	0	0	0	20	2900	157
12	0	0	0	0	0	0	20	2900	157
13	0	0	0	0	0	0	37	4510	451
14	0	0	0	0	0	0	44	4600	546
15	0	0	0	0	0	0	63	4700	799
16	0	0	0	0	0	0	196	9830	5200
17	0	0	0	0	0	0	159	8150	3500
18	0	0	0	0	0	0	103	6830	1900
19	0	0	0	0	0	0	75	5430	1100
20	0	0	0	0	0	0	64	4630	800
21	0	0	0	3.7	1000	10	69	2270	423
22	0	0	0	394	9870	10500	71	4690	900
23	0	0	0	441	21000	25000	56	4100	620
24	0	0	0	208	10700	6000	30	2470	200
25	0	0	0	108	6520	1900	34	2720	250
26	0	0	0	71	4000	768	36	2880	280
27	0	0	0	56	3470	525	33	2580	230
28	0	0	0	45	3460	420	15	1730	70
29	0	0	0	--	--	--	5.3	1400	20
30	0	0	0	--	--	--	1.6	1160	5.0
31	0	0	0	--	--	--	.20	1850	1.0
TOTAL	2.1	--	.80	1326.7	--	45123	1432.10	--	20250.0

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
31	--	--	--	0	0	0	--	--	--
TOTAL	0	--	0	0	--	0	0	--	0

09471800 SAN PEDRO RIVER NEAR BENSON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	9.5	9750	250	0	0	0
2	0	0	0	1.4	6610	25	0	0	0
3	0	0	0	3.9	7600	80	0	0	0
4	0	0	0	1.0	7410	20	0	0	0
5	0	0	0	.50	7410	10	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	5.4	6860	100	0	0	0	0	0	0
11	131	28800	10200	2.8	9920	75	0	0	0
12	11	10100	300	18	12300	600	0	0	0
13	2.8	9920	75	5.0	7410	100	0	0	0
14	116	31900	10000	2.0	5560	30	0	0	0
15	355	42300	40500	1.0	7410	20	0	0	0
16	489	43200	57000	0	0	0	0	0	0
17	147	35300	14000	0	0	0	0	0	0
18	40	20400	2200	0	0	0	0	0	0
19	35	20100	1900	0	0	0	0	0	0
20	30	18500	1500	0	0	0	0	0	0
21	25	16300	1100	0	0	0	0	0	0
22	20	14800	800	12	10800	350	0	0	0
23	15	12300	500	5.0	7410	100	0	0	0
24	10	9260	250	1.0	7410	20	0	0	0
25	10	9260	250	0	0	0	0	0	0
26	5.0	7410	100	0	0	0	0	0	0
27	5.0	7410	100	0	0	0	0	0	0
28	5.0	7410	100	0	0	0	0	0	0
29	5.0	7410	100	0	0	0	0	0	0
30	50	29600	4000	0	0	0	0	0	0
31	21	14100	800	0	0	0	--	--	--
TOTAL	1533.2	--	145875	63.10	--	1680	0	--	0

TOTAL DISCHARGE FOR YEAR (CFS-DAYS) 7432.10
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS) 429664.4

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
FEB.												
23...	1000	13.0	332	26900	24100	39	46	63	80	92	99	100
MAR.												
13...	1115	7.0	45	4510	548	42	55	75	86	93	100	--
JULY												
15...	1200	25.0	42	41500	4710	62	80	96	99	100	--	--

09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ.

LOCATION.--Lat 32°58'38", long 110°46'11", in SE¼SW¼ sec.24, T.5 S., R.15 E., Pinal County, at gaging station 0.7 mi (1.1 km) south of Winkelman, and 1.0 mi (1.6 km) upstream from mouth.

DRAINAGE AREA.--4,471 mi^2 (11,580 km^2), of which 696 mi^2 (1,803 km^2) is in Mexico.

PERIOD OF RECORD.--Specific conductance: January 1966 to September 1973.
Water temperatures: January 1966 to September 1973.
Sediment records: January 1966 to September 1973.

EXTREMES.--1972-73:
Specific conductance: Maximum daily, 1,600 micromhos Sept. 6; minimum daily, 400 micromhos Oct. 19, Mar. 30.
Water temperatures: Maximum, 40.0°C June 6, Aug. 24; minimum, 12.5°C Dec. 29.
Sediment concentrations: Maximum daily, 83,000 mg/l July 16; minimum daily, no flow on many days.
Sediment discharge: Maximum daily, 526,000 tons Oct. 20; minimum daily, 0 tons on many days.

Period of record:
Specific conductance: Maximum daily, 2,050 micromhos Sept. 15, 1969; minimum daily, 300 micromhos Oct. 4, 1970.
Water temperatures: Maximum, 42.0°C Sept. 10, 1968; minimum, 2.0°C Dec. 31, 1966.
Sediment concentrations: Maximum daily, 138,000 mg/l June 14, 1972; minimum daily, no flow on many days.
Sediment discharge: Maximum daily, 961,000 tons Dec. 20, 1967; minimum daily, 0 tons on many days.

REMARKS.--No flow many days each year.

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1100	1200	1100	1250	1200	590	1300	680	---	900	1200
2	---	1120	1200	1200	1200	1200	790	1350	1200	---	990	1430
3	920	1150	1200	1200	1200	1200	890	1350	1300	---	1150	1500
4	990	1150	1200	1200	1200	1200	1050	1350	1390	---	1300	1560
5	400	1150	1150	1200	1200	1200	1190	1200	1390	---	1200	1590
6	550	1150	1200	1200	1200	1250	1200	1250	1500	---	810	1600
7	580	1150	1150	1200	1200	1200	1200	1250	1550	---	1350	---
8	850	1150	1150	1200	1200	1200	1200	1250	1550	---	1350	---
9	1050	1150	1150	1200	1200	1210	1200	1350	1550	---	1400	---
10	1100	1150	1150	1200	1200	1100	1200	1400	---	---	---	---
11	1200	1150	1150	1200	1200	1190	1200	1400	---	---	---	---
12	1150	1150	1150	1200	1200	1180	1250	1350	---	---	---	---
13	1150	1150	1150	1200	1200	1010	1250	1350	---	---	---	---
14	1150	1150	1150	1200	1200	560	1250	1500	1150	---	---	---
15	1190	1150	1150	1300	1200	440	1150	1500	1300	730	1380	---
16	1190	1150	1150	1300	1200	450	1200	1500	---	670	1290	---
17	1190	1150	1150	1300	1200	500	1300	1500	---	560	1150	---
18	600	1050	1150	1300	1200	500	1250	1500	---	800	---	---
19	400	1150	1150	1300	1200	600	1250	1500	---	1100	---	---
20	520	1150	1150	1300	1200	800	1250	1500	---	1100	---	---
21	580	1150	1150	1300	1190	1000	1300	---	---	1200	---	---
22	850	1150	1200	1300	420	1100	1250	---	---	1200	---	---
23	950	1150	1200	1300	430	1000	1300	---	---	1250	---	---
24	1100	1150	1200	1300	460	1000	1300	---	---	1400	1310	---
25	1100	1150	1200	1300	580	1000	1250	---	---	1350	1200	---
26	1150	1150	1200	1300	800	1190	1300	---	---	---	1150	---
27	1150	1150	1200	1300	1000	1190	1300	---	---	---	1300	---
28	1150	1200	700	1300	1150	900	1300	---	---	---	1360	---
29	1100	1200	650	1300	---	600	1300	---	---	---	1360	---
30	1100	1200	920	1300	---	400	1300	---	---	---	1400	---
31	1100	---	1100	1300	---	450	---	---	---	---	1250	---
MEAN	949	1150	1130	1250	1070	936	1190	---	---	---	---	---
YEAR	MAX	1600	MIN	400	MEAN	1140						

09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	20.0	15.0	13.0	22.5	26.0	24.0	29.0	23.5	---	37.0	20.0
2	---	23.0	24.0	18.0	20.0	27.0	21.0	34.0	33.0	---	36.0	35.0
3	25.0	23.0	22.0	20.0	18.0	27.0	26.0	36.0	22.0	---	34.0	37.0
4	22.0	25.0	21.0	19.0	25.0	22.0	25.5	32.0	35.0	---	34.0	35.0
5	23.5	25.0	15.5	19.0	26.0	19.0	28.0	26.0	39.0	---	37.0	37.0
6	28.0	25.0	19.0	20.0	26.0	18.0	25.0	21.0	40.0	---	37.0	39.0
7	26.0	26.0	17.0	21.0	23.0	17.0	28.0	33.0	39.0	---	36.0	---
8	30.0	21.0	18.0	20.0	24.0	21.0	28.0	35.0	30.0	---	38.0	---
9	30.0	23.0	17.0	23.0	23.0	18.0	28.0	33.0	23.0	---	38.0	---
10	31.0	24.0	17.0	20.0	17.0	17.0	29.0	36.0	---	---	---	---
11	33.0	20.0	16.0	20.0	17.0	27.0	31.0	34.0	---	---	---	---
12	30.0	17.0	17.0	21.0	22.0	16.0	32.0	33.0	---	---	---	---
13	31.0	22.0	16.0	23.0	17.0	17.0	28.0	32.0	---	---	---	---
14	35.0	25.0	19.0	23.0	25.0	14.5	25.0	37.0	31.5	---	---	---
15	34.0	22.0	17.0	22.0	23.0	19.0	28.0	29.0	30.0	27.0	36.5	---
16	34.0	23.0	17.0	24.0	17.0	20.5	30.0	32.0	---	27.5	31.0	---
17	24.0	21.0	18.0	21.0	25.0	16.5	32.0	34.0	---	28.0	28.0	---
18	23.5	22.0	20.0	24.0	27.0	22.0	25.0	39.0	---	36.0	---	---
19	21.0	25.0	21.0	20.0	24.0	24.0	25.0	29.0	---	38.0	---	---
20	19.0	21.0	22.0	14.0	18.0	25.0	20.0	29.0	---	36.0	---	---
21	20.5	18.0	21.0	17.0	18.0	21.0	32.0	- -	---	28.0	---	---
22	24.0	19.0	20.0	20.0	14.0	20.0	25.0	---	---	38.0	---	---
23	24.0	20.0	21.0	20.0	14.0	18.0	31.0	---	---	39.0	---	---
24	26.0	15.0	22.0	23.0	18.5	24.0	31.0	---	---	39.0	40.0	---
25	22.0	20.0	21.0	23.0	22.0	26.0	31.0	---	---	25.0	35.0	---
26	25.0	20.0	20.0	19.0	22.0	27.0	30.0	---	---	---	33.0	---
27	22.0	17.0	18.0	17.0	24.0	19.0	28.0	---	---	---	35.0	---
28	27.0	25.0	14.0	20.0	25.0	21.0	27.0	---	---	---	37.0	---
29	26.0	23.0	12.5	18.0	---	17.0	24.0	---	---	---	37.0	---
30	20.0	16.0	14.0	18.0	---	16.5	25.0	---	---	---	23.0	---
31	28.0	---	18.0	20.0	---	17.5	---	---	---	---	35.0	---
MEAN	26.5	21.5	18.5	20.0	21.5	20.5	27.5	---	---	---	---	---
YEAR	MAX	40.0	MIN	12.5	MEAN	25.0						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	13	360	13	7.6	95	1.9
2	0	0	0	11	360	11	7.6	105	2.2
3	.20	41	.04	10	350	9.4	7.6	104	2.1
4	59	2810	2360	9.2	280	7.0	7.0	105	2.0
5	695	20200	55200	7.6	205	4.2	7.6	208	4.3
6	297	26400	29800	6.5	140	2.5	7.0	119	2.2
7	68	18600	3410	6.2	87	1.5	7.6	130	2.7
8	34	44000	4040	6.2	56	.94	8.2	161	3.6
9	16	35300	1520	6.2	76	1.3	8.7	169	4.0
10	11	12000	356	6.2	69	1.2	9.2	185	4.6
11	6.2	3400	57	6.2	43	.72	9.2	249	6.2
12	4.4	1500	18	24	7970	516	9.2	195	4.8
13	3.2	860	7.4	20	326	18	9.2	191	4.7
14	2.3	610	3.8	11	182	5.4	8.7	210	4.9
15	2.2	355	2.1	9.8	124	3.3	8.2	200	4.4
16	1.4	140	.53	7.6	114	2.3	8.2	158	3.5
17	1.4	105	.40	8.7	112	2.6	8.2	116	2.6
18	58	32900	7560	13	568	20	8.2	116	2.6
19	1760	26900	11000	12	156	5.1	7.6	102	2.1
20	5420	35800	526000	9.8	130	3.4	7.6	114	2.3
21	267	17200	12400	7.6	136	2.8	7.6	82	1.7
22	96	15800	4100	7.6	131	2.7	7.0	92	1.7
23	48	14600	1890	7.6	118	2.4	7.0	79	1.5
24	32	7800	674	7.6	89	1.8	7.0	73	1.4
25	26	3900	274	7.6	77	1.6	7.0	69	1.3
26	23	2200	137	7.6	55	1.1	7.0	91	1.7
27	21	1300	74	7.6	81	1.7	8.7	95	2.2
28	21	1400	79	7.6	74	1.5	24	21100	1370
29	16	900	39	7.6	55	1.1	218	23100	13600
30	14	570	22	7.6	101	2.1	55	3060	454
31	13	420	15	--	--	--	21	235	13
TOTAL	9016.30	--	661039.27	280.2	--	647.66	531.7	--	15516.2

09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	18	193	9.4	8.2	74	1.6	51	326	45
2	16	198	8.6	8.2	63	1.4	44	232	28
3	18	157	7.6	8.2	123	2.7	35	173	16
4	16	141	6.1	8.2	65	1.4	34	202	19
5	16	132	5.7	8.2	52	1.2	28	192	14
6	15	122	4.9	8.2	52	1.2	23	170	11
7	14	105	4.0	8.7	90	2.1	23	177	11
8	9.8	133	3.5	8.7	30	.70	28	470	36
9	9.8	146	3.9	8.2	45	1.0	34	340	31
10	9.2	103	2.6	7.6	81	1.7	58	700	110
11	8.2	108	2.4	7.6	54	1.1	39	400	42
12	8.2	98	2.2	7.6	22	.45	30	220	18
13	8.2	91	2.0	7.9	320	6.8	48	830	108
14	8.2	82	1.8	6.5	260	4.6	373	8680	11100
15	8.2	81	1.8	7.6	88	1.8	720	7950	16000
16	7.0	82	1.5	8.2	95	2.1	482	6390	8320
17	7.0	56	1.1	8.2	70	1.5	591	8600	13700
18	7.0	74	1.4	8.2	63	1.4	408	8000	8810
19	7.6	80	1.6	7.6	77	1.6	228	5200	3200
20	7.6	105	2.2	8.2	87	1.9	106	2600	744
21	7.6	123	2.5	9.2	152	3.8	75	1400	284
22	7.6	74	1.5	2280	23200	172000	46	1100	137
23	7.0	68	1.3	2100	21200	127000	48	1400	181
24	7.6	73	1.5	692	15600	30600	51	1600	220
25	7.6	70	1.4	282	7700	5860	53	1450	207
26	7.6	111	2.3	106	4800	1370	34	800	73
27	7.6	90	1.8	69	2700	503	30	800	65
28	7.6	87	1.8	58	1400	219	75	2000	405
29	7.6	101	2.1	--	--	--	284	5760	5570
30	8.2	87	1.9	--	--	--	637	8080	14700
31	8.7	105	2.5	--	--	--	426	8000	9210
TOTAL	303.7	--	94.9	5756.2	--	337594.05	5142	--	93415

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	240	4400	2850	4.9	133	1.8	319	13200	17100
2	150	1600	648	4.9	147	1.9	6.1	2800	46
3	81	800	175	4.9	103	1.4	2.6	339	2.4
4	48	450	58	4.9	192	2.5	1.9	230	1.2
5	39	300	32	11	367	11	1.3	216	.76
6	39	240	25	12	360	12	.70	123	.23
7	32	230	20	8.2	190	4.2	.10	98	.03
8	25	245	16	6.8	109	2.0	.10	101	.03
9	27	240	17	4.9	120	1.6	.10	100	.03
10	28	225	17	4.9	124	1.6	0	0	0
11	28	200	15	4.4	154	1.8	0	0	0
12	27	190	14	3.4	128	1.2	0	0	0
13	27	200	15	3.0	104	.84	0	0	0
14	23	180	11	2.6	88	.62	34	27000	2480
15	22	150	8.9	2.6	107	.75	3.0	1500	12
16	20	151	8.2	2.6	72	.51	1.1	250	.74
17	19	172	8.8	2.6	87	.61	0	0	0
18	19	129	6.6	3.9	73	.77	0	0	0
19	18	118	5.7	1.3	72	.25	0	0	0
20	18	140	6.8	1.1	106	.31	0	0	0
21	17	182	8.4	0	0	0	0	0	0
22	17	136	6.2	0	0	0	0	0	0
23	16	140	6.0	0	0	0	0	0	0
24	14	126	4.8	0	0	0	0	0	0
25	13	141	4.9	0	0	0	0	0	0
26	11	178	5.3	0	0	0	0	0	0
27	9.0	122	3.0	0	0	0	0	0	0
28	6.1	151	2.5	0	0	0	0	0	0
29	4.9	101	1.3	0	0	0	0	0	0
30	4.9	195	2.6	0	0	0	0	0	0
31	--	--	--	.80	462	1.0	--	--	--
TOTAL	1042.9	--	4003.0	95.70	--	48.66	370.00	--	19643.42

09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	15	36600	1480	1.9	1000	5.1
2	0	0	0	13	22200	779	.90	810	2.0
3	0	0	0	14	27200	1030	.60	610	.99
4	0	0	0	12	9700	314	.40	490	.53
5	0	0	0	12	5000	162	.10	182	.05
6	0	0	0	20	7700	416	0	64	0
7	0	0	0	3.9	3000	32	0	0	0
8	0	0	0	1.3	700	2.4	0	0	0
9	0	0	0	.20	283	.15	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	6.9	15300	909	0	0	0	0	0	0
13	5.0	14700	438	0	0	0	0	0	0
14	23	9000	3400	0	0	0	0	0	0
15	63	27800	5860	2.0	7350	52	0	0	0
16	222	83000	49800	3.4	4700	43	0	0	0
17	261	75400	53100	1.1	2200	6.5	0	0	0
18	87	46000	10800	0	0	0	0	0	0
19	32	29000	2510	0	0	0	0	0	0
20	18	22000	1070	0	0	0	0	0	0
21	4.9	2200	29	.10	50	.01	0	0	0
22	.40	850	.92	0	0	0	0	0	0
23	.10	600	.16	.10	300	.08	0	0	0
24	.60	300	.49	.40	321	.35	0	0	0
25	0	0	0	12	55300	2540	0	0	0
26	0	0	0	18	62000	3010	0	0	0
27	0	0	0	13	20000	702	0	0	0
28	0	0	0	7.5	2400	49	0	0	0
29	13	7570	1250	4.4	1280	15	0	0	0
30	9.0	20000	486	3.9	2800	29	0	0	0
31	5.0	26100	352	6.8	1540	28	--	--	--
TOTAL	750.90	--	130005.57	164.10	--	10690.49	3.90	--	8.67

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	23457.60
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	1272706.89

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM
FEB.							
23...	1730	17.0	1530	17100	70600	38	47
MAR.							
14...	1740	14.0	490	11900	15700	32	51
29...	1615	17.0	444	7660	9180	28	30
JUNE							
01...	0720	20.0	490	18800	24900	35	47
14...	1615	33.0	23	27600	1710	51	68
JULY							
16...	1830	29.0	204	104000	57300	37	51
AUG.							
25...	1710	33.0	17	67000	3080	75	89

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM
FEB.							
23...	66	--	94	100	--	--	--
MAR.							
14...	61	--	82	92	98	100	--
29...	62	--	85	94	99	100	--
JUNE							
01...	70	--	91	95	96	98	100
14...	97	100	--	--	--	--	--
JULY							
16...	65	--	68	71	87	97	100
AUG.							
25...	100	--	--	--	--	--	--

09474000 GILA RIVER AT KELVIN, ARIZ.
(Irrigation network station)

LOCATION.--Lat 33°06'11", long 110°58'26", in NE¼NW¼ sec.12, T.4 S., R.13 E., Pinal County, at Florence-Kelvin road bridge at Kelvin, 200 ft (60 m) upstream from Mineral Creek, 700 ft (200 m) upstream from gaging station, 18 mi (29 km) downstream from San Pedro River, 19 mi (31 km) upstream from Ashurst-Hayden Dam, and 49 mi (79 km) downstream from Coolidge Dam.

DRAINAGE AREA.--18,011 mi² (46,648 km²) at gaging station, of which 5,125 mi² (13,274 km²) is below Coolidge Dam.

PERIOD OF RECORD.--Chemical analyses: December 1950 to September 1973.
Water temperatures: December 1950 to September 1973.
Sediment records: January 1958 to September 1973.

EXTREMES.--1972-73:
Dissolved solids: Maximum, 1,720 mg/l Nov. 1-12; minimum, 325 mg/l Feb. 22-24.
Hardness: Maximum, 740 mg/l Nov. 14-30; minimum, 170 mg/l Mar. 30-31.
Specific conductance: Maximum daily, 2,650 micromhos Nov. 27; minimum daily, 438 micromhos Feb. 23.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	MEAN DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVEI PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)
OCT.									
01-04	28	25	9	130	33	180	9.4	230	0
05...	1080	21	9	78	9.3	26	4.2	192	0
06-08	586	25	30	99	13	48	5.4	198	0
09-10	422	26	9	130	23	120	8.6	218	0
11-18	68	27	9	160	36	200	10	239	0
19...	2950	26	9	100	16	50	5.3	263	0
20...	6500	22	9	65	9.2	24	4.5	161	0
21-22	660	24	9	94	18	89	6.0	182	0
23-31	155	28	20	170	41	210	9.5	279	0
NOV.									
01-12	80	29	9	200	56	270	42	256	0
13...	238	28	9	160	40	160	6.6	237	7
14-30	106	27	9	210	53	240	9.2	221	0
DEC.									
01-21	121	29	20	140	33	170	9.1	236	0
22-28	178	29	40	81	21	130	6.1	205	0
29-30	525	27	9	72	15	81	5.0	183	0
31...	250	31	9	130	33	160	6.5	258	0
JAN.									
01-16	134	30	30	130	32	180	7.6	246	0
17-21	71	31	30	190	48	240	11	281	0
22-31	138	29	50	100	26	150	7.0	219	0
FEB.									
01-21	252	25	9	81	19	120	5.9	186	0
22-24	2330	24	50	55	9.3	34	3.9	149	0
25-26	557	26	9	82	18	70	5.0	189	0
27-28	191	27	20	130	32	130	7.4	244	0
MAR.									
01...	131	24	20	100	38	160	8.3	132	0
02-13	537	24	10	62	17	100	5.1	175	0
14-19	999	28	10	66	16	63	4.6	162	3
20-29	456	29	10	94	25	120	6.3	189	9
30-31	1320	28	10	50	12	48	3.7	137	0
APR.									
01-03	857	28	0	79	21	93	4.8	188	6
04-05	329	23	0	100	33	150	6.9	185	0
06-30	698	19	0	50	16	100	4.9	134	6
MAY									
01-31	694	26	10	56	14	91	4.8	170	0
JUNE									
01-30	658	27	30	55	13	89	5.0	166	0
JULY									
01-31	845	28	40	56	13	85	4.9	174	0
AUG.									
01-31	805	28	40	52	12	85	4.7	169	0
SEP.									
01-30	674	29	30	51	12	82	4.2	171	0
WTD. AVG.	--	26	23	65	16	91	5.2	173	1
TIME WTD. AVG.	535	27	22	90	22	124	7.2	191	1
TOT. LOAD (TONS)	--	13900	12	34400	8170	47800	2760	91400	488

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

EXTREMES, 1972-73:--Continued
Water temperatures: Maximum, 28.0°C Oct. 14; minimum, 8.0°C Dec. 13, 30, Jan. 1, 30.
Sediment concentrations: Maximum daily, 33,600 mg/l Oct. 19; minimum daily, 16 mg/l Nov. 26.
Sediment discharge: Maximum daily, 360,000 tons Oct. 20; minimum daily, 3.4 tons Nov. 26.

Period of record:
Dissolved solids: Maximum, 4,330 mg/l Jan. 3, 1966; minimum, 294 mg/l Sept. 24, 1954, Feb. 12, 1963.
Hardness: Maximum, 2,610 mg/l Jan. 3, 1966; minimum, 152 mg/l Sept. 1-30, 1957.
Specific conductance: Maximum daily, 5,120 micromhos May 22, 1961; minimum daily, 406 micromhos Oct. 18, 1971.
Water temperatures: Maximum, 36.5°C July 25, Aug. 20, 1953; minimum, 3.5°C Jan. 13, 1962.
Sediment concentrations: Maximum daily, 153,000 mg/l July 30, 1961; minimum daily, 0 mg/l July 3, 1971.
Sediment discharge: Maximum daily, 740,000 tons Dec. 23, 1965; minimum daily, 0 ton on July 2-5, 11, 1971.

REMARKS.--No appreciable inflow from Mineral Creek between sampling point and gaging station except during periods of heavy local rains. Sediment discharge figures include sediment load from Mineral Creek.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRATE (NO3) (MG/L)	DIS- SOLVED NITRITE (NO2) (MG/L)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS- SOLVED ORTHO PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)
OCT.									
01-04	340	230	1.1	1.0	.0	.23	.12	200	1120
05...	98	27	.5	1.1	.0	.24	.31	70	372
06-08	180	44	.7	2.4	.0	.54	.37	90	550
09-10	310	130	1.0	6.6	.0	1.5	.37	160	912
11-18	430	250	1.1	1.2	.0	.26	.15	210	1330
19...	150	56	.4	.80	.0	.17	.25	90	652
20...	110	9.7	.5	2.6	.0	.59	.43	70	342
21-22	200	100	.8	4.9	.0	1.1	.28	130	736
23-31	430	290	1.1	2.3	.0	.53	.21	210	1530
NOV.									
01-12	610	380	1.1	.70	.0	.15	.06	260	1710
13...	460	180	1.0	2.9	.0	.65	.18	170	1120
14-30	660	320	1.2	1.3	.0	.29	.03	230	1680
DEC.									
01-21	360	220	1.3	3.0	.0	.67	.09	180	1100
22-28	180	160	1.1	3.6	.0	.82	.21	160	760
29-30	140	88	.9	3.9	.0	.89	.25	100	576
31...	310	210	1.0	2.4	.0	.54	.21	160	1020
JAN.									
01-16	300	230	1.2	2.6	.0	.59	.15	180	1040
17-21	540	330	1.3	2.1	.0	.48	.09	220	1480
22-31	260	190	1.1	2.8	.0	.64	.18	160	880
FEB.									
01-21	170	140	1.1	3.1	.0	.69	.25	140	692
22-24	100	17	.8	3.4	.0	.76	.31	80	348
25-26	200	63	.9	3.4	.0	.76	.21	100	606
27-28	330	150	1.0	2.4	.0	.54	.21	150	995
MAR.									
01...	370	210	.8	.09	.0	.03	.21	120	993
02-13	130	130	.7	2.6	.0	.58	.40	90	575
14-19	140	63	.6	4.0	.0	.90	.49	50	483
20-29	240	140	.8	3.3	.0	.75	.40	110	753
30-31	100	46	.4	2.9	.0	.66	.52	40	366
APR.									
01-03	180	110	.7	--	--	.54	.28	140	609
04-05	330	180	.8	--	--	.01	.09	170	922
06-30	120	120	1.0	--	--	.10	.12	110	530
MAY									
01-31	100	110	.7	2.7	.0	.62	.52	80	503
JUNE									
01-30	100	110	.9	3.2	.0	.72	.64	100	470
JULY									
01-31	96	99	.9	3.0	.0	.68	.58	110	477
AUG.									
01-31	86	98	.9	2.6	.0	.59	.67	120	459
SEP.									
01-30	82	97	.8	1.1	.0	.25	.77	100	440
WTD. AVG.	131	107	.8	2.7	.0	.56	.48	107	545
TIME WTD. AVG.	213	154	1.0	2.5	.0	.54	.38	134	755
TOT. LOAD (TONS)	69300	56500	445	1260	.0	293	253	56	287000

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.								
01-04	1060	1.52	84.7	460	270	3.7	1660	7.9
05...	361	.51	1080	230	76	.7	551	7.5
06-08	518	.75	870	300	140	1.2	800	7.5
09-10	870	1.24	1040	420	240	2.6	1310	7.6
11-18	1230	1.81	244	550	350	3.7	1870	7.7
19...	535	.89	5190	320	100	1.2	847	7.4
20...	330	.47	6000	200	68	.7	490	7.3
21-22	631	1.00	1310	310	160	2.2	981	7.6
23-31	1320	2.08	640	590	360	3.8	2040	7.8
NOV.								
01-12	1720	2.33	369	730	520	4.4	2390	8.1
13...	1170	1.52	720	560	360	2.9	1640	8.4
14-30	1630	2.28	481	740	560	3.8	2320	8.1
DEC.								
01-21	1090	1.50	359	490	290	3.4	1650	8.2
22-28	717	1.03	365	290	120	3.3	1190	8.2
29-30	527	.78	816	240	91	2.3	841	7.9
31...	1010	1.39	689	460	250	3.2	1570	8.3
JAN.								
01-16	1040	1.41	376	460	250	3.7	1640	8.2
17-21	1530	2.01	284	670	440	4.0	2270	8.1
22-31	877	1.20	328	360	180	3.5	1400	8.2
FEB.								
01-21	660	.94	471	280	130	3.1	1090	8.1
22-24	325	.47	2190	180	53	1.1	503	7.8
25-26	565	.82	911	280	120	1.8	861	8.0
27-28	933	1.35	513	460	260	2.6	1420	8.2
MAR.								
01...	977	1.35	351	410	300	3.5	1540	8.1
02-13	558	.78	834	220	81	2.9	966	8.3
14-19	469	.66	1300	230	93	1.8	757	8.5
20-29	761	1.02	927	340	170	2.8	1180	8.5
30-31	359	.50	1300	170	62	1.6	585	8.3
APR.								
01-03	618	.83	1410	280	120	2.4	955	8.4
04-05	915	1.25	819	390	230	3.3	1390	8.2
06-30	504	.72	999	190	71	3.2	857	8.6
MAY								
01-31	490	.68	943	200	58	2.8	838	8.3
JUNE								
01-30	486	.64	835	190	55	2.8	821	7.9
JULY								
01-31	472	.65	1090	190	51	2.7	806	7.8
AUG.								
01-31	453	.62	998	180	41	2.8	768	7.8
SEP.								
01-30	444	.60	801	180	37	2.7	757	7.9
WTD. AVG.	533	.74	--	227	83	2.6	876	8.0
TIME WTD. AVG.	737	1.03	--	316	157	3.0	1160	8.1
TOT. LOAD (TONS)	281000	--	--	--	--	--	--	--

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1410	---	1790	1750	1100	1540	796	838	772	782	796	720
2	---	2310	1710	1870	1120	937	927	819	824	776	767	720
3	1910	2300	1630	1580	1110	860	1130	829	818	776	764	722
4	1630	2440	1800	1660	1070	981	1450	825	806	750	769	718
5	551	2400	1690	1540	1080	1000	1430	741	800	836	764	725
6	740	2450	1720	1560	1060	954	1160	824	800	782	764	725
7	832	2490	1770	1550	1020	972	902	858	794	788	---	720
8	819	---	1720	1560	981	963	886	844	824	771	764	726
9	1180	2410	1600	1550	1000	972	1030	851	812	753	738	731
10	1440	2500	1560	1530	1120	949	959	833	806	753	734	722
11	1660	2530	1670	1550	1080	967	955	827	779	759	734	748
12	1740	2180	1670	1550	981	967	815	835	773	759	764	732
13	1760	1640	1630	1580	1060	911	835	828	822	809	757	742
14	1760	2130	1590	1510	1030	857	766	831	798	775	752	728
15	1930	2250	1580	1550	1030	596	876	831	772	969	752	728
16	2060	2280	1580	1690	1030	767	862	844	810	842	742	735
17	2030	2200	1590	2080	1090	718	822	831	806	823	742	740
18	1890	2130	1660	2190	1150	744	869	831	774	788	745	792
19	847	1980	1540	2230	1150	826	858	837	---	758	735	735
20	490	2230	1540	2300	1150	1100	844	824	768	763	721	742
21	757	2360	---	2330	1100	1380	776	896	770	758	737	771
22	1220	2300	1180	1660	505	---	833	882	779	794	737	734
23	1570	2480	1010	1560	438	1410	772	814	795	733	745	734
24	1730	2420	1050	1480	528	1510	856	808	792	728	760	744
25	1950	2410	1100	1480	719	1030	846	808	755	738	765	753
26	2030	2440	1150	1470	981	1020	825	831	765	733	740	748
27	2100	2650	1260	1390	1290	---	852	---	776	752	745	763
28	2100	2390	1220	1220	1520	1000	757	798	797	738	740	758
29	2140	2470	675	1340	---	934	745	---	776	---	732	763
30	2250	---	973	1120	---	517	831	---	750	733	727	758
31	2310	---	1570	1040	---	637	---	795	---	724	726	---
MEAN	1560	2320	1470	1630	1020	966	909	829	790	775	749	739
YEAR	MAX	2650	MIN	438	MEAN	1140						

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.0	---	12.0	8.0	10.0	18.0	15.0	---	---	---	20.0	20.0
2	---	15.0	12.0	10.0	11.0	17.0	14.0	---	---	20.0	21.0	20.0
3	20.0	17.0	12.0	9.0	11.0	16.0	15.0	---	---	21.0	21.0	19.0
4	22.0	17.0	12.0	9.0	12.0	14.0	16.0	---	---	21.0	20.0	19.0
5	21.0	17.0	12.0	10.0	13.0	14.0	18.0	---	22.0	21.0	21.0	20.0
6	21.0	16.0	12.0	10.0	14.0	13.0	17.0	---	23.0	22.0	21.0	19.0
7	21.0	17.0	10.0	11.0	14.0	12.0	17.0	---	---	22.0	---	20.0
8	25.0	---	11.0	11.0	14.0	12.0	16.0	---	25.0	22.0	20.0	19.0
9	24.0	16.0	11.0	12.0	12.0	13.0	16.0	---	24.0	22.0	20.0	19.0
10	25.0	15.0	11.0	12.0	10.0	14.0	17.0	---	24.0	21.0	21.0	20.0
11	26.0	15.0	10.0	11.0	10.0	14.0	17.0	---	23.0	22.0	22.0	19.0
12	21.0	14.0	10.0	10.0	12.0	12.0	18.0	---	19.0	21.0	22.0	19.0
13	26.0	14.0	8.0	11.0	11.0	10.0	17.0	---	19.0	21.0	21.0	19.0
14	28.0	15.0	9.0	12.0	12.0	10.0	15.0	---	20.0	19.0	20.0	19.0
15	26.0	15.0	9.0	12.0	12.0	11.0	15.0	---	---	19.0	21.0	19.0
16	27.0	15.0	10.0	12.0	12.0	14.0	15.0	---	---	19.0	20.0	19.0
17	22.0	15.0	10.0	14.0	12.0	14.0	15.0	---	---	20.0	21.0	19.0
18	22.0	14.0	12.0	13.0	14.0	15.0	14.0	---	---	20.0	22.0	18.0
19	18.0	15.0	11.0	11.0	14.0	15.0	14.0	---	---	20.0	22.0	18.0
20	17.0	15.0	12.0	11.0	12.0	16.0	13.0	---	---	20.0	22.0	18.0
21	17.0	14.0	---	10.0	12.0	15.0	15.0	---	---	20.0	22.0	18.0
22	17.0	14.0	10.0	10.0	10.0	---	---	---	---	20.0	22.0	18.0
23	18.0	14.0	10.0	11.0	10.0	14.0	---	---	---	20.0	20.0	18.0
24	20.0	15.0	10.0	10.0	12.0	15.0	---	---	---	19.0	20.0	19.0
25	17.0	14.0	11.0	10.0	15.0	15.0	---	---	---	19.0	21.0	19.0
26	16.0	14.0	11.0	9.0	16.0	16.0	---	---	---	20.0	20.0	19.0
27	17.0	14.0	10.0	10.0	17.0	---	---	---	---	20.0	20.0	18.0
28	18.0	15.0	10.0	10.0	17.0	14.0	---	---	---	20.0	20.0	18.0
29	18.0	14.0	9.0	9.0	---	13.0	---	---	---	---	20.0	19.0
30	16.0	---	8.0	8.0	---	12.0	---	---	---	20.0	20.0	19.0
31	14.0	---	9.0	10.0	---	---	---	---	---	21.0	20.0	---
MEAN	21.0	15.0	10.5	10.5	12.5	14.0	---	---	---	20.5	21.0	19.0
YEAR	MAX	28.0	MIN	8.0	MEAN	16.0						

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	33	128	11	74	199	40	81	195	43
2	26	125	8.8	70	150	28	85	158	36
3	24	136	8.8	69	193	36	86	273	63
4	28	1500	113	65	151	26	94	488	124
5	1080	18500	70000	62	145	24	89	408	98
6	583	19900	44100	68	125	23	100	314	85
7	618	15000	25000	68	118	22	101	214	58
8	558	4100	6180	68	75	14	96	244	63
9	494	10000	13300	67	75	14	163	209	92
10	349	7500	7070	66	81	14	241	283	184
11	89	2900	697	66	53	9.4	244	208	137
12	69	610	114	208	234	131	193	166	86
13	68	810	149	238	406	261	121	173	56
14	64	490	85	153	147	61	114	272	84
15	58	265	41	99	100	27	114	184	57
16	57	210	32	102	84	23	105	255	72
17	58	210	33	169	68	31	111	1040	312
18	77	540	126	238	135	87	102	568	156
19	2950	33600	316000	197	157	83	99	158	42
20	6500	22200	360000	108	74	22	97	342	90
21	793	8500	18200	91	37	9.1	97	200	52
22	526	4500	6390	84	44	10	121	930	304
23	454	3930	4820	78	44	9.3	142	930	356
24	190	2800	1440	75	30	6.1	141	610	232
25	136	1200	441	70	41	7.7	141	420	160
26	141	490	187	80	16	3.4	142	330	126
27	117	360	114	68	38	7.0	160	344	149
28	101	310	84	64	56	9.7	400	413	446
29	90	310	75	63	32	5.4	700	5420	10200
30	86	250	58	60	30	4.9	350	2620	2480
31	78	200	42	--	--	--	250	252	170
TOTAL	16495	--	874919.6	2988	--	1049.0	5080	--	16613

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	150	133	54	218	240	200	131	450	159
2	110	114	34	209	264	149	285	1600	1230
3	99	473	126	216	285	166	425	1400	1610
4	138	399	149	209	178	100	436	700	824
5	149	235	94	216	195	114	436	700	824
6	157	205	87	218	197	116	478	1600	2060
7	146	192	76	231	420	262	546	1170	1720
8	142	118	45	260	404	284	582	1820	2860
9	136	254	93	251	301	204	606	1910	3120
10	133	108	39	260	660	463	662	1770	3160
11	142	136	52	271	2990	2190	638	1590	2740
12	133	95	34	300	1000	810	670	1210	2190
13	131	103	36	341	840	773	815	820	1800
14	128	201	69	371	510	511	1210	3980	13000
15	130	103	36	358	300	290	1280	6710	23200
16	115	88	27	309	258	215	940	4020	10200
17	80	108	23	257	222	154	990	5260	14100
18	72	105	20	223	150	90	850	5590	12800
19	70	86	16	193	168	88	686	3900	7220
20	64	100	17	180	157	76	530	2400	3430
21	67	103	19	200	150	81	312	1120	943
22	105	213	60	2480	13600	119000	236	830	529
23	106	119	34	3050	19700	162000	271	780	571
24	109	85	25	1450	15400	60300	358	1190	1150
25	111	84	25	770	7400	15400	490	960	1270
26	110	73	22	344	3100	2880	466	600	755
27	117	139	44	218	1400	824	482	550	716
28	153	294	121	164	1000	443	530	590	844
29	176	376	179	--	--	--	815	1290	2840
30	180	421	205	--	--	--	1400	3250	12300
31	216	432	252	--	--	--	1240	2800	9370
TOTAL	3875	--	2113	13767	--	368183	19796	--	139535

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1000	1400	3780	815	800	1760	793	6480	14800
2	890	1100	2640	815	730	1610	586	1720	2720
3	710	830	1590	820	630	1390	578	650	1010
4	414	560	626	810	590	1290	570	720	1110
5	257	505	350	1110	3880	13200	554	490	733
6	341	870	801	875	1880	4440	550	472	701
7	443	1010	1210	766	570	1180	550	496	736
8	446	890	1070	750	730	1480	554	426	637
9	446	930	1120	706	630	1200	578	570	890
10	490	1290	1710	706	590	1120	598	335	541
11	586	1350	2140	698	580	1090	602	493	801
12	638	870	1500	686	530	982	646	884	1540
13	722	1180	2300	674	460	837	674	1620	2950
14	762	1280	2630	678	500	915	698	479	903
15	718	900	1740	682	670	1230	662	967	1730
16	750	1360	2750	662	760	1360	674	823	1500
17	815	1660	3650	622	520	873	682	642	1180
18	830	1430	3200	622	500	840	674	733	1330
19	820	900	1990	614	720	1190	670	634	1150
20	815	940	2070	610	730	1200	666	685	1230
21	815	910	2000	606	370	605	666	451	811
22	800	920	1990	606	420	687	662	1270	2270
23	790	600	1280	606	550	900	670	814	1470
24	790	860	1830	606	560	916	686	944	1750
25	790	1030	2200	606	533	872	714	615	1180
26	785	1090	2310	607	528	858	726	474	929
27	790	1000	2130	598	475	767	750	429	869
28	790	740	1580	606	439	718	750	487	986
29	785	590	1250	610	400	659	770	842	1750
30	790	740	1580	610	400	659	800	747	1610
31	--	--	--	731	1560	3260	--	--	--
TOTAL	20818	--	57017	21508	--	50088	19753	--	51817

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	800	360	778	790	1730	3690	825	670	1490
2	800	242	523	780	1740	3660	830	470	1050
3	800	327	706	815	1770	3890	810	360	787
4	810	593	1300	770	830	1720	795	370	794
5	830	623	1400	790	710	1510	790	520	1110
6	850	366	840	795	770	1650	775	340	711
7	855	417	963	780	540	1140	762	226	465
8	860	535	1240	770	410	852	766	372	769
9	860	520	1210	770	710	1480	775	289	605
10	860	302	701	766	760	1570	780	289	609
11	890	443	1060	770	770	1600	704	310	589
12	910	660	1620	780	670	1410	765	540	1120
13	910	1360	3340	790	710	1510	780	640	1350
14	915	1870	4620	785	660	1400	770	670	1390
15	960	17200	44600	810	580	1270	754	560	1140
16	1040	15000	42100	820	450	996	742	430	861
17	1050	12600	35700	820	430	952	682	348	641
18	925	5500	13700	830	350	784	670	402	727
19	900	1620	3940	825	330	735	662	623	1110
20	830	1230	2760	825	340	757	666	491	883
21	780	710	1500	820	660	1460	666	434	780
22	785	600	1270	820	470	1040	622	340	571
23	785	640	1360	820	320	708	594	425	682
24	766	540	1120	820	510	1130	534	283	408
25	762	590	1210	820	1220	2700	518	421	589
26	762	700	1440	820	950	2100	474	265	339
27	770	870	1810	820	600	1330	450	237	288
28	770	670	1390	820	390	863	432	286	334
29	780	660	1390	820	530	1170	414	150	168
30	780	560	1180	865	980	2290	410	88	97
31	785	710	1500	825	650	1150	--	--	--
TOTAL	26180	--	178271	24951	--	48517	20217	--	22457

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	195428
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	1810579.6

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
(ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM
FEB.							
22...	1600	10.0	3610	19200	187000	24	32
JUNE							
01...	1600	--	710	8240	15800	27	46
JULY							
15...	1500	19.0	920	25800	64100	47	65

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
FEB.							
22...	47	78	89	94	96	98	100
JUNE							
01...	71	90	93	98	100	--	--
JULY							
15...	92	98	98	99	100	--	--

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, ARIZ.
(Irrigation network station)

LOCATION.--Lat 33°33'19", long 111°32'08", in sec.33, T.3 N., R.8 E. (unsurveyed), Maricopa County, at Stewart Mountain Dam, 3.5 mi (5.6 km) upstream from gaging station, and 9.5 mi (15.3 km) upstream from Verde River.

DRAINAGE AREA.--6,232 mi^2 (16,140 km^2), at gaging station, of which 21 mi^2 (54 km^2) is downstream from Stewart Mountain Dam.

PERIOD OF RECORD.--Chemical analyses: December 1950 to September 1973.
Water temperatures: December 1950 to September 1973.

EXTREMES.--1972-73:
Specific conductance: Maximum daily, 1,440 micromhos Oct. 2, 3, 5, 6; minimum daily, 630 micromhos June 18, 19.
Water temperatures: Maximum, 20.0°C on several days during October; minimum, 11.0°C on many days during February, March, and April.

Period of record:
Specific conductance: Maximum daily, 2,490 micromhos Aug. 20, 1951; minimum daily, 620 micromhos Mar. 28, 1953.
Water temperatures: Maximum, 29.0°C Aug. 24, 26, 27, 1951, Sept. 11, 12, 1969; minimum, 9.5°C Feb. 14, 1951.

REMARKS.--No inflow between sampling point and gaging station except during periods of heavy local rains. No flow at sampling point Oct. 8-18, Oct. 22 to Feb. 13, Mar. 1-5.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
20...	0730	2700	14	20	53	14	180	6.1	160
FEB.									
15...	0900	755	15	9	49	13	150	5.7	151
MAR.									
15...	0730	2000	14	9	48	13	150	5.5	156
APR.									
15...	0730	5640	16	30	45	13	150	4.4	145
MAY									
15...	0630	8000	12	9	44	11	96	3.6	174
JUNE									
15...	0630	1840	15	9	38	9.9	68	3.1	129
JULY									
15...	0730	2200	15	0	42	11	75	3.2	146
AUG.									
13...	0630	1810	15	10	43	11	77	2.8	143
SEP.									
15...	0730	1880	18	220	41	11	72	3.3	133

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DIS. SOLVED NITRATE (NO3) (MG/L)	DIS. SOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)	DISSOLVED BORON (B) (UG/L)
OCT.									
20...	0	76	280	.5	1.4	.0	.31	.03	120
FEB.									
15...	0	58	240	.4	2.4	.0	.55	.12	160
MAR.									
15...	0	57	230	.4	2.1	.0	.48	.06	70
APR.									
15...	0	53	210	.2	.90	.0	.21	.06	130
MAY									
15...	0	46	130	.3	.40	.0	.08	.00	70
JUNE									
15...	0	44	100	.4	.10	.0	.03	.00	60
JULY									
15...	0	46	110	.2	.00	.0	.00	.03	80
AUG.									
13...	0	44	110	.2	.31	.0	.07	.12	80
SEP.									
15...	0	53	110	.3	.66	.0	.15	.15	100

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT. 20...	760	704	1.03	190	59	5.7	1270	7.2
FEB. 15...	652	611	.89	180	52	4.9	1130	7.9
MAR. 15...	628	599	.85	170	45	5.0	1100	8.1
APR. 15...	636	565	.87	170	47	5.1	1070	8.2
MAY 15...	458	430	.62	160	12	3.4	821	7.5
JUNE 15...	353	342	.48	140	30	2.5	629	7.8
JULY 15...	400	374	.54	150	30	2.7	686	8.4
AUG. 13...	414	374	.56	150	35	2.7	688	8.2
SEP. 15...	408	375	.55	150	39	2.6	661	7.8

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	---	---	---	---	---	1080	800	650	650	670	665
2	1440	---	---	---	---	---	1340	770	650	655	670	670
3	1440	---	---	---	---	---	1340	770	650	660	670	670
4	1430	---	---	---	---	---	1280	775	645	660	670	670
5	1440	---	---	---	---	---	1280	755	650	660	670	670
6	1440	---	---	---	---	---	1240	740	645	660	670	665
7	1430	---	---	---	---	1130	1230	735	645	660	670	665
8	---	---	---	---	---	---	1200	720	645	665	670	665
9	---	---	---	---	---	1120	1210	720	640	665	670	665
10	---	---	---	---	---	---	1200	720	645	660	675	660
11	---	---	---	---	---	---	1180	710	655	665	680	665
12	---	---	---	---	---	---	1160	705	655	665	685	660
13	---	---	---	---	---	1120	1140	700	655	665	685	660
14	---	---	---	---	1140	1100	1110	800	650	680	690	660
15	---	---	---	---	1140	1100	1080	810	635	680	670	670
16	---	---	---	---	1130	1110	1090	---	635	670	675	675
17	---	---	---	---	1130	1070	1050	---	635	670	670	680
18	---	---	---	---	1140	1070	1000	680	630	670	670	680
19	---	---	---	---	1140	930	1000	680	630	680	665	680
20	1310	---	---	---	1140	900	955	675	635	680	---	675
21	1240	---	---	---	1140	1090	940	670	635	670	665	675
22	---	---	---	---	--	1000	900	670	635	670	665	660
23	---	---	---	---	1130	1080	890	670	640	670	665	655
24	---	---	---	---	1140	1210	870	665	640	665	675	655
25	---	---	---	---	1130	1360	---	680	645	670	670	655
26	---	---	---	---	1130	1360	860	690	650	670	670	655
27	---	---	---	---	1120	1220	845	670	650	670	665	650
28	---	---	---	---	1130	1140	835	680	650	670	670	650
29	---	---	---	---	---	1000	840	675	660	670	660	650
30	---	---	---	---	---	1340	800	680	660	670	670	650
31	---	---	---	---	---	1340	---	650	---	670	660	---
MEAN	---	--	--	---	---	---	1070	713	645	667	671	664
YEAR	MAX	1440	MIN	630	MEAN	825						

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	---	---	---	---	---	11.0	13.0	15.0	17.0	18.0	18.0
2	20.0	---	---	---	---	---	11.0	13.0	15.0	17.0	18.0	18.0
3	20.0	---	---	---	---	---	11.0	13.0	15.0	18.0	18.0	18.0
4	20.0	---	---	---	---	---	11.0	14.0	15.0	18.0	18.0	18.0
5	20.0	---	---	---	---	---	12.0	14.0	15.0	17.0	18.0	18.0
6	21.0	---	---	---	---	---	13.0	14.0	16.0	17.0	18.0	18.0
7	20.0	---	---	---	---	13.0	13.0	14.0	16.0	17.0	18.0	18.0
8	---	---	---	---	---	---	13.0	14.0	16.0	17.0	18.0	18.0
9	---	---	---	---	---	13.0	13.0	14.0	16.0	18.0	18.0	18.0
10	---	---	---	---	---	---	13.0	14.0	16.0	18.0	18.0	18.0
11	---	---	---	---	---	---	13.0	14.0	16.0	18.0	18.0	18.0
12	---	---	---	---	---	---	13.0	14.0	16.0	18.0	18.0	18.0
13	---	---	---	---	---	12.0	13.0	14.0	16.0	18.0	19.0	18.0
14	---	---	---	---	11.0	11.0	13.0	14.0	17.0	18.0	19.0	18.0
15	---	---	---	---	11.0	11.0	13.0	14.0	17.0	18.0	20.0	18.0
16	---	---	---	---	11.0	11.0	13.0	---	16.0	19.0	19.0	18.0
17	---	---	---	---	11.0	11.0	13.0	---	16.0	18.0	18.0	18.0
18	---	---	---	---	12.0	12.0	13.0	15.0	16.0	18.0	18.0	17.0
19	---	---	---	---	12.0	12.0	13.0	15.0	17.0	18.0	18.0	18.0
20	21.0	---	---	---	11.0	12.0	13.0	15.0	17.0	19.0	---	18.0
21	20.0	---	---	---	11.0	12.0	13.0	15.0	17.0	17.0	18.0	18.0
22	---	---	---	---	---	12.0	13.0	15.0	19.0	17.0	18.0	18.0
23	---	---	---	---	13.0	11.0	13.0	15.0	18.0	17.0	18.0	18.0
24	---	---	---	---	13.0	11.0	13.0	15.0	18.0	17.0	18.0	18.0
25	---	---	---	---	13.0	11.0	---	15.0	17.0	17.0	18.0	18.0
26	---	---	---	---	13.0	11.0	14.0	15.0	17.0	17.0	18.0	18.0
27	---	---	---	---	13.0	11.0	14.0	15.0	17.0	17.0	18.0	18.0
28	---	---	---	---	13.0	11.0	14.0	15.0	17.0	18.0	18.0	18.0
29	---	---	---	---	---	11.0	14.0	15.0	17.0	18.0	18.0	18.0
30	---	---	---	---	---	12.0	14.0	15.0	17.0	18.0	18.0	18.0
31	---	---	---	---	---	11.0	---	15.0	---	18.0	18.0	---
MEAN	---	---	---	---	---	---	13.0	14.5	16.5	17.5	18.0	18.0
YEAR	MAX	21.0	MIN	11.0	MEAN	15.5						

09508300 WET BOTTOM CREEK NEAR CHILDS, ARIZ.
(Hydrologic bench-mark station)

LOCATION.--Lat 34°09'39", long 111°41'32", in sec.36, T.9½ N., R.6 E. (unsurveyed), Gila County in Tonto National Forest, at gaging station on right bank, 1.4 mi (2.2 km) upstream from mouth, and 13 mi (21 km) south of town of Childs.

DRAINAGE AREA.--36.4 mi² (94.3 km²).

PERIOD OF RECORD.--Chemical analyses: August 1968 to September 1973.
Sediment records: August 1968 to September 1973.

REMARKS.--No flow Oct. 1-3, July 1-15, Aug. 14-Sept. 30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)
OCT.									
05...	1330	46	18	100	12	3.4	9.6	1.8	46
25...	1030	20	19	120	11	3.1	36	1.8	97
NOV.									
28...	1230	8.9	20	40	11	3.0	6.1	.8	40
DEC.									
12...	1020	42	16	60	6.9	2.1	4.1	.7	32
JAN.									
11...	1115	20	17	160	8.8	2.4	4.4	.6	26
FEB.									
13...	1200	176	13	60	6.0	1.8	3.1	.7	19
MAR.									
16...	1130	156	14	40	6.7	2.1	3.4	.7	23
APR.									
12...	1415	36	15	40	8.3	2.7	4.4	.9	33
15...	1330	1.9	25	20	19	5.1	11	1.1	86
JUNE									
19...	1200	0.10	27	20	33	9.3	17	1.6	166

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS_ SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)
OCT.									
05...	0	13	6.5	1.0	--	--	.61	.00	90
25...	0	16	21	.8	--	--	.30	.00	670
NOV.									
28...	0	13	5.9	.6	.00	.0	.01	.00	40
DEC.									
12...	0	12	2.9	.4	.10	.0	.02	.03	40
JAN.									
11...	0	13	3.2	.5	.10	.0	.03	.03	20
FEB.									
13...	0	11	2.3	.3	.20	.0	.04	.06	40
MAR.									
16...	0	9.2	2.6	.2	.20	.0	.05	.03	10
APR.									
12...	0	9.4	2.7	.3	.10	.0	.02	.03	0
15...	0	12	6.5	.8	.00	.0	.01	.00	50
JUNE									
19...	0	9.6	12	1.1	.10	.0	.03	.03	30

09508300 WET BOTTOM CREEK NEAR CHILDS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.									
05...	112	91	.15	44	6	.6	150	7.2	22.0
25...	176	159	.24	40	0	2.5	255	8.1	19.0
NOV.									
28...	112	80	.15	40	7	.4	108	7.3	10.0
DEC.									
12...	69	61	.09	26	0	.4	87	7.5	9.0
JAN.									
11...	79	63	.11	32	11	.3	81	7.5	11.0
FEB.									
13...	74	48	.10	22	7	.3	62	7.0	7.0
MAR.									
16...	66	51	.09	25	7	.3	68	7.5	8.0
APR.									
12...	76	60	.10	32	5	.3	87	7.3	8.0
15...	147	123	.20	68	0	.6	183	7.9	10.0
JUNE									
19...	188	193	.26	120	0	.7	305	7.8	20.0

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT.							
05...	1330	46	138	6.0	22.0	--	7.5
25...	1030	20	120	6.0	19.0	--	8.0
DEC.							
12...	1020	42	136	--	4.0	9.0	10.0
JAN.							
11...	1115	20	120	6.5	7.5	11.0	--
FEB.							
13...	1200	176	57	6.5	7.0	13.0	10.0
MAR.							
16...	1130	156	--	6.0	8.0	16.0	8.0
APR.							
12...	1415	36	82	6.0	8.0	15.0	10.0
JUNE							
19...	1200	.10	--	--	20.0	35.0	10.0

09508300 WET BOTTOM CREEK NEAR CHILDS, ARIZ.--Continued

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DISSOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUSPENDED GROSS ALPHA AS U-NAT. (UG/L)	DISSOLVED GROSS BETA AS CS-137 (PC/L)	SUSPENDED GROSS BETA AS CS-137 (PC/L)	DISSOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L)	DISSOLVED RA-226 (RADON METHOD) (PC/L)	DISSOLVED URANIUM (U) (UG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	TOTAL NON-FILTRABLE RESIDUE (MG/L)
NOV. 28...	1250	2.0	<.4	2.2	<.4	1.7	<.4	.03	.13	85	<1

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DISCHARGE (CFS)	INSTANTANEOUS DISCHARGE (CFS)	ALDRIN (UG/L)	ALDRIN IN BOTTOM DEPOSITS (UG/KG)	DDD (UG/L)	DDD IN BOTTOM DEPOSITS (UG/KG)	DDE (UG/L)	DDE IN BOTTOM DEPOSITS (UG/KG)	DDT (UG/L)	DDT IN BOTTOM DEPOSITS (UG/KG)
NOV. 28...	1230	--	8.9	.00	.0	.00	.0	.00	.0	.00	.0

DATE	DIELDRIN (UG/L)	DIELDRIN IN BOTTOM DEPOSITS (UG/KG)	ENDRIN (UG/L)	ENDRIN IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM DEPOSITS (UG/KG)	LINDANE (UG/L)	LINDANE IN BOTTOM DEPOSITS (UG/KG)	CHLORDANE (UG/L)
NOV. 28...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.0

DATE	CHLORDANE IN BOTTOM DEPOSITS (UG/KG)	DIAZINON (UG/L)	MALATHION (UG/L)	METHYL PARATHION (UG/L)	PARATHION (UG/L)	PCB (UG/L)	PCB IN BOTTOM DEPOSITS (UG/KG)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)
NOV. 28...	0	.00	.00	.00	.00	.0	0	.00	.00	.00

PERIODIC DAILY SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TEMPERATURE (DEG C)	DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT. 05...	1320	22.0	46	14	1.7
DEC. 12...	1115	4.0	42	3	.34
JAN. 11...	1130	7.5	20	1	.05
FEB. 13...	1235	7.0	176	9	4.3
MAR. 16...	1145	8.0	156	4	1.7
APR. 12...	1415	8.0	36	2	.19
MAY 11...	1325	10.0	1.9	1	.01

09510000 VERDE RIVER BELOW BARTLETT DAM, ARIZ.
(Irrigation network station)

LOCATION.--Lat 33°49'03", long 111°38'08", in SE¼ sec.33, T.6 N., R.7 E. (unsurveyed), Maricopa County, at gaging station in Tonto National Forest, on right bank 1,300 ft (400 m) downstream from Bartlett Dam, 5.9 mi (9.5 km) upstream from Camp Creek, and 18 mi (29 km) east of town of Cave Creek.

DRAINAGE AREA.--6,185 mi^2 (16,019 km^2).

PERIOD OF RECORD.--Chemical analyses: December 1950 to September 1973.
Water temperatures: December 1950 to September 1973.

EXTREMES.--1972-73:
Specific conductance: Maximum daily, 655 micromhos Oct. 1; minimum daily, 195 micromhos May 13, 14.
Water temperatures: Maximum, 24.0°C Oct. 1-4; minimum, 8.0°C on several days during January and February.

Period of record:
Specific conductance: Maximum daily, 958 micromhos Nov. 10, 1956; minimum daily, 195 micromhos May 13, 14, 1973.
Water temperatures: Maximum, 32.0°C July 18, Aug. 14, 1951; minimum, 5.0°C Jan. 30, 1952.

REMARKS.--No flow Oct. 8, 9, 20.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT. 15...	0800	17	26	30	33	20	27	4.3	194
NOV. 15...	0800	830	17	50	29	12	12	2.7	146
DEC. 15...	0800	867	16	30	30	13	12	2.9	149
JAN. 15...	0800	1310	16	20	29	13	12	2.8	147
FEB. 15...	0800	1370	16	20	32	14	13	2.2	167
MAR. 15...	0800	8300	16	20	32	13	13	2.4	154
APR. 15...	0800	11000	14	9	26	10	9.1	1.6	129
MAY 15...	0700	671	14	9	22	8.0	6.0	1.4	110
JUNE 15...	0700	586	15	20	27	8.0	6.2	1.4	108
JULY 15...	0800	11	15	0	25	8.6	7.0	1.3	121
AUG. 15...	0800	1150	14	10	26	9.7	8.3	1.5	131
SEP. 15...	0800	500	17	20	31	12	11	1.7	149

09510000 VERDE RIVER BELOW BARTLETT DAM, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)	DISSOLVED BORON (B) (UG/L)
OCT. 15...	0	48	14	.6	3.6	.0	.81	.00	130
NOV. 15...	0	25	10	.3	1.9	.0	.44	.15	100
DEC. 15...	0	27	8.1	.2	1.4	.0	.32	.21	130
JAN. 15...	0	25	7.3	.3	1.3	.0	.30	.15	130
FEB. 15...	0	25	7.9	.3	1.3	.0	.29	.15	80
MAR. 15...	0	27	8.4	.2	.50	.0	.13	.18	70
APR. 15...	0	16	5.7	.1	.10	.0	.03	.00	80
MAY 15...	0	11	4.1	.3	.20	.0	.04	.06	0
JUNE 15...	0	11	3.6	.3	.20	.0	.05	.09	20
JULY 15...	0	12	4.6	.2	.60	.0	.14	.15	40
AUG. 15...	0	14	5.1	.1	.04	.0	.02	.15	60
SEP. 15...	0	19	6.9	.3	.80	.0	.18	.18	80

DATE	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT. 15...	316	276	.43	160	6	.9	428	7.1
NOV. 15...	218	184	.30	120	2	.5	296	7.4
DEC. 15...	232	184	.32	130	6	.5	303	7.9
JAN. 15...	212	181	.29	130	5	.5	306	8.3
FEB. 15...	215	196	.29	140	1	.5	325	7.9
MAR. 15...	182	189	.25	130	7	.5	314	7.8
APR. 15...	176	146	.24	110	0	.4	248	7.9
MAY 15...	116	121	.16	88	0	.3	198	7.7
JUNE 15...	126	126	.17	100	12	.3	202	7.8
JULY 15...	145	134	.20	98	0	.3	223	7.9
AUG. 15...	158	144	.21	100	0	.4	234	7.8
SEP. 15...	173	173	.24	130	5	.4	290	7.9

09510000 VERDE RIVER BELOW BARTLETT DAM, ARIZ.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	655	240	280	315	310	330	275	215	200	205	230	260
2	645	260	290	320	315	330	275	200	200	205	230	265
3	650	285	290	310	315	325	275	200	200	210	240	275
4	640	260	295	305	310	330	270	198	205	205	235	270
5	645	265	295	300	310	330	255	200	200	205	235	270
6	645	290	295	---	310	325	250	200	200	205	235	270
7	610	295	295	---	310	325	250	198	200	210	240	270
8	---	290	295	---	310	330	255	200	205	210	240	275
9	---	295	300	---	310	325	255	200	200	210	240	280
10	---	300	305	---	315	330	250	200	200	210	240	280
11	460	310	305	---	310	325	250	200	205	220	240	280
12	450	310	305	305	315	325	255	205	210	210	245	285
13	445	305	305	300	315	330	255	195	205	215	240	290
14	440	305	310	300	320	315	255	195	205	220	240	290
15	455	305	305	300	320	320	250	200	200	220	240	295
16	445	305	300	300	320	325	245	200	200	220	245	300
17	460	305	300	305	320	320	240	200	205	220	250	300
18	470	310	305	305	325	310	230	200	205	220	245	300
19	450	---	305	305	325	315	230	260	205	220	250	295
20	---	---	310	310	325	315	235	245	205	220	245	300
21	---	---	310	310	320	305	235	260	205	220	250	305
22	330	---	310	315	320	310	225	240	205	230	250	310
23	250	305	---	315	355	305	230	200	230	220	250	310
24	250	300	315	315	320	310	220	200	210	230	250	310
25	240	305	315	315	320	305	---	200	205	225	250	310
26	240	300	310	315	320	300	215	200	210	225	250	315
27	240	295	310	315	325	295	215	205	205	230	250	320
28	235	295	320	315	325	290	220	205	210	225	255	325
29	235	295	305	315	---	280	220	200	210	230	255	325
30	235	290	310	315	---	290	215	200	210	230	260	330
31	240	---	310	315	---	280	---	200	---	230	260	---
MEAN	425	293	304	310	318	315	243	207	205	218	245	294
YEAR	MAX	655	MIN	195	MEAN	279						

09510000 VERDE RIVER BELOW BARTLETT DAM, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	15.0	12.0	9.0	8.0	10.0	11.0	14.0	14.0	15.0	17.0	20.0
2	24.0	15.0	12.0	9.0	8.0	10.0	11.0	13.0	14.0	15.0	18.0	20.0
3	24.0	15.0	12.0	9.0	8.0	10.0	12.0	12.0	14.0	15.0	18.0	20.0
4	24.0	15.0	12.0	9.0	8.0	10.0	11.0	12.0	14.0	15.0	18.0	20.0
5	23.0	15.0	13.0	9.0	8.0	10.0	11.0	12.0	14.0	15.0	18.0	20.0
6	23.0	15.0	12.0	---	9.0	10.0	11.0	12.0	14.0	15.0	18.0	20.0
7	23.0	15.0	12.0	---	9.0	10.0	11.0	12.0	14.0	15.0	18.0	20.0
8	---	15.0	12.0	---	9.0	10.0	11.0	12.0	15.0	15.0	18.0	20.0
9	---	15.0	12.0	---	9.0	10.0	11.0	12.0	15.0	16.0	18.0	20.0
10	---	15.0	12.0	---	9.0	10.0	11.0	13.0	15.0	17.0	18.0	20.0
11	21.0	15.0	12.0	---	9.0	10.0	11.0	13.0	15.0	17.0	18.0	20.0
12	21.0	15.0	12.0	8.0	9.0	10.0	11.0	13.0	15.0	17.0	19.0	20.0
13	21.0	14.0	12.0	9.0	9.0	10.0	12.0	14.0	15.0	17.0	19.0	20.0
14	21.0	14.0	11.0	9.0	9.0	10.0	12.0	14.0	14.0	17.0	19.0	20.0
15	21.0	14.0	11.0	9.0	9.0	10.0	12.0	14.0	14.0	17.0	19.0	20.0
16	21.0	14.0	11.0	9.0	9.0	12.0	13.0	14.0	14.0	17.0	19.0	20.0
17	21.0	14.0	11.0	9.0	9.0	12.0	13.0	14.0	14.0	17.0	19.0	20.0
18	21.0	14.0	11.0	9.0	9.0	12.0	13.0	14.0	14.0	16.0	19.0	20.0
19	21.0	---	11.0	9.0	9.0	12.0	13.0	14.0	14.0	16.0	19.0	20.0
20	---	---	11.0	9.0	9.0	12.0	13.0	14.0	14.0	16.0	19.0	21.0
21	---	---	11.0	9.0	9.0	12.0	13.0	14.0	15.0	16.0	19.0	21.0
22	17.0	---	11.0	9.0	9.0	12.0	13.0	14.0	15.0	16.0	19.0	21.0
23	16.0	14.0	11.0	9.0	9.0	12.0	12.0	15.0	15.0	16.0	19.0	21.0
24	16.0	15.0	11.0	9.0	9.0	12.0	12.0	15.0	15.0	16.0	19.0	19.0
25	16.0	14.0	11.0	8.0	10.0	12.0	---	14.0	15.0	17.0	19.0	20.0
26	15.0	13.0	11.0	8.0	10.0	12.0	13.0	14.0	15.0	17.0	19.0	20.0
27	15.0	13.0	11.0	8.0	10.0	11.0	13.0	14.0	15.0	17.0	19.0	20.0
28	15.0	13.0	11.0	8.0	10.0	11.0	14.0	14.0	15.0	17.0	19.0	20.0
29	15.0	13.0	11.0	8.0	---	11.0	14.0	14.0	15.0	17.0	19.0	20.0
30	15.0	12.0	10.0	8.0	---	11.0	14.0	14.0	15.0	17.0	20.0	20.0
31	15.0	---	9.0	8.0	---	11.0	---	---	---	17.0	20.0	---
MEAN	19.5	14.5	11.5	8.5	9.0	11.0	12.0	13.5	14.5	16.0	18.5	20.0
YEAR	MAX	24.0	MIN	8.0	MEAN	14.0						

09520700 GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'45", long 114°33'09", in SW¼SE¼ sec.19, T.8 S., R.22 W., Yuma County, 0.5 mi (0.8 km) upstream from mouth, and 5 mi (8 km) east of Yuma.

DRAINAGE AREA.--58,000 mi² (150,000 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED SODIUM PLUS POTASSIUM (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
OCT.									
04...	1415	32	26	10	120	49	430	--	5.7
18...	--	--	20	--	250	101	--	589	--
NOV.									
08...	1320	21	25	20	180	70	450	--	8.2
24...	1330	66	18	--	145	55	460	--	8.0
DEC.									
05...	1600	28	26	30	150	54	440	--	6.7
20...	--	145	22	--	182	84	580	--	10
JAN.									
03...	1450	108	24	9	140	58	470	--	6.3
17...	1310	109	20	--	144	58	450	--	8.3
FEB.									
07...	1300	32	23	20	150	59	440	--	7.2
21...	1340	74	19	--	141	60	460	--	8.9
MAR.									
07...	1410	74	25	9	140	59	470	--	6.2
21...	1400	121	22	--	150	60	460	--	9.0
APR.									
05...	1340	136	26	9	180	70	590	--	7.4
16...	1010	--	20	--	167	74	540	--	7.0
MAY									
03...	1310	--	24	9	150	63	500	--	6.9
14...	0935	654	16	--	71	20	155	--	9.6
JUNE									
04...	0915	1080	14	30	65	18	150	--	6.5
18...	1430	645	15	--	81	26	200	--	9.7
JULY									
02...	1135	325	1[illegible]	9	95	30	250	--	8.1
16...	1420	161	21	--	176	73	560	--	10
AUG.									
06...	1435	52	25	10	150	61	490	--	6.0
20...	1300	75	17	--	198	87	610	--	9.1
SEP.									
05...	1320	50	25	10	140	57	470	--	6.4
17...	1300	52	18	--	142	65	475	--	6.0

09520700 GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)
OCT.									
04...	306	0	530	470	1.4	--	--	2.2	800
18...	364	0	670	940	--	--	--	--	--
NOV.									
08...	347	0	570	600	.9	5.6	.1	1.3	680
24...	300	0	550	560	--	--	--	--	--
DEC.									
05...	322	0	560	510	1.0	6.5	.1	1.5	730
20...	318	0	530	890	--	--	--	--	--
JAN.									
03...	297	0	460	620	.9	4.3	.0	1.0	700
17...	296	0	480	610	--	--	--	--	--
FEB.									
07...	294	0	420	670	.8	4.2	.1	.98	650
21...	306	0	470	620	--	--	--	--	--
MAR.									
07...	310	0	470	620	1.0	5.1	.1	1.2	750
21...	300	0	465	640	--	--	--	--	--
APR.									
05...	319	0	510	820	.9	4.1	.0	.95	790
16...	320	0	510	785	--	--	--	--	--
MAY									
03...	313	0	530	660	1.0	4.1	.0	.95	830
14...	208	0	120	220	--	--	--	--	--
JUNE									
04...	201	0	100	210	.7	.10	.0	.03	160
18...	214	0	165	288	--	--	--	--	--
JULY									
02...	255	0	200	380	.8	1.0	.7	.46	590
16...	310	0	510	840	.9	--	--	--	--
AUG.									
06...	297	0	510	690	1.0	2.7	.0	.62	720
20...	294	0	540	970	1.0	--	--	--	--
SEP.									
05...	287	0	500	620	.9	--	--	.54	640
17...	294	0	480	650	1.0	--	--	--	--

09520700 GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.									
04...	1810	1790	2.46	500	250	8.4	2840	8.2	26.0
18...	2990	2750	4.07	1040	740	--	4420	7.9	--
NOV.									
08...	2120	2090	2.88	740	450	7.2	3330	8.1	20.0
24...	2030	1940	2.76	590	340	8.3	3180	8.0	--
DEC.									
05...	1900	1920	2.58	600	330	7.6	3030	7.7	20.5
20...	2530	2460	3.44	900	539	8.9	4080	8.0	--
JAN.									
03...	--	1930	2.62	590	340	8.4	3140	8.0	21.0
17...	1940	1920	2.64	600	358	8.0	3150	8.0	--
FEB.									
07...	1950	1920	2.65	620	380	7.7	3190	8.0	--
21...	1960	1930	2.67	600	349	8.2	3220	8.0	--
MAR.									
07...	1940	1960	2.64	590	340	8.4	3180	8.0	16.5
21...	--	1940	2.64	620	374	8.0	3220	8.0	--
APR.									
05...	2360	2370	3.21	740	480	9.5	3850	8.2	24.0
16...	2300	2260	3.13	720	458	8.7	3740	7.9	--
MAY									
03...	2010	2100	2.73	630	380	8.6	3340	7.9	26.0
14...	722	716	.98	260	90	4.2	1250	7.9	--
JUNE									
04...	694	664	.94	240	72	4.2	1170	7.9	25.5
18...	892	892	1.21	310	134	4.9	1550	7.8	--
JULY									
02...	1330	1110	1.81	360	150	5.7	1950	7.6	29.5
16...	2340	2350	3.18	740	486	9.0	3880	7.8	--
AUG.									
06...	2120	2080	2.88	630	380	8.5	3390	7.5	2.5
20...	2730	2580	3.71	850	609	9.1	4260	7.9	--
SEP.									
05...	2060	1960	2.80	580	350	8.5	3190	7.9	24.0
17...	2050	1980	2.79	620	379	8.3	3280	8.0	--

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)
OCT.									
19...	1340	E35	3900	7.9	22.5	22.0	8.4	--	--
JAN.									
18...	1420	95	3000	7.8	22.5	24.0	7.1	--	--
APR.									
19...	1405	110	3150	7.8	25.0	28.0	7.9	--	--
MAY									
21...	1000	--	--	--	--	--	--	330	--
JUNE									
19...	1235	750	--	--	--	--	--	450	780
JULY									
26...	1430	48	3050	7.7	25.5	39.0	8.2	--	--

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.

LOCATION.--Lat 32°43'07", long 114°43'05", in NE¼SE¼ sec.21, T.8 S., R.24 W., Gila and Salt River meridian, in Arizona, Yuma County, at gaging station on left bank, at northerly international boundary, 0.5 mi (0.8 km) east of Andrade, 1.1 mi (1.8 km) upstream from Morelos Dam, 1.1 mi (1.8 km) downstream from Rockwood Gate, 20.7 mi (33.3 km) upstream from southerly international boundary, and 21 mi (34 km) downstream from Laguna Dam.

DRAINAGE AREA.--243,000 mi² (629,400 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	DISSOLVED SODIUM PLUS POTASSIUM (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.											
02...	0730	745	13	111	37	--	--	206	220	0	400
10...	0730	1350	11	103	36	--	--	171	188	0	375
16...	0730	702	16	126	43	--	--	239	252	0	430
24...	0730	605	14	125	43	--	--	217	244	0	420
30...	0800	693	16	118	43	--	--	252	248	0	430
NOV.											
06...	0800	6.4	16	114	40	230	4.6	--	234	0	405
13...	0800	719	15	113	38	220	5.6	--	226	0	400
20...	0800	719	13	115	41	210	6.8	--	226	0	410
27...	0800	746	14	122	41	240	6.7	--	246	0	430
DEC.											
04...	0800	659	15	118	40	225	7.2	--	238	0	415
11...	0800	1640	11	105	36	185	6.8	--	200	0	380
18...	0800	1600	11	106	37	190	7.1	--	204	0	390
26...	0800	1590	12	112	41	220	7.1	--	220	0	410
JAN.											
02...	0800	2310	10	102	38	180	6.7	--	200	0	375
08...	0800	2240	10	104	39	190	7.1	--	198	0	385
15...	0800	2210	10	106	38	190	7.1	--	204	0	390
22...	0800	925	13	111	40	210	7.2	--	224	0	405
29...	0800	959	12	111	40	210	7.6	--	220	0	405
FEB.											
05...	0800	872	12	110	40	210	7.0	--	220	0	410
12...	0800	1510	11	102	40	190	7.2	--	204	0	385
20...	0800	1870	12	111	37	200	7.4	--	212	0	395
26...	0800	1820	11	105	41	190	7.0	--	206	0	390
MAR.											
05...	0800	2520	11	103	35	180	7.2	--	198	0	370
12...	0800	2690	10	100	33	165	7.4	--	192	0	355
19...	0800	2940	10	98	37	170	6.8	--	198	0	365
26...	0800	2990	10	97	34	160	7.0	--	188	0	345
APR.											
02...	0800	2890	11	98	33	165	7.0	--	190	0	345
09...	0800	2910	10	97	35	165	6.8	--	192	0	345
16...	0800	2820	10	99	34	165	6.8	--	192	0	345
23...	0800	2520	10	101	34	165	6.7	--	194	0	350
30...	0800	1310	11	106	35	180	6.9	--	204	0	370
MAY											
07...	0800	1020	13	106	34	190	7.4	--	216	0	350
14...	0800	1360	13	94	29	175	8.0	--	214	0	270
21...	0730	1320	13	86	28	165	8.4	--	212	0	220
29...	0730	1250	15	78	24	160	8.4	--	212	0	175
JUNE											
04...	0730	1460	13	82	26	165	8.7	--	216	0	190
11...	0730	1380	12	110	34	220	8.3	--	236	0	320
18...	0730	1920	11	98	31	180	7.4	--	206	0	315
25...	0730	1980	15	86	28	180	8.3	--	210	0	255
JULY											
02...	0730	2190	10	101	34	180	7.2	--	208	0	325
09...	0730	2260	10	101	36	185	7.2	--	198	0	360
16...	0730	2550	10	103	35	180	7.3	--	196	0	360
23...	0730	2330	11	101	36	180	6.8	--	192	0	365
30...	0730	2340	10	99	36	170	6.5	--	184	0	360
AUG.											
06...	0730	2200	11	101	36	175	6.6	--	190	0	365
13...	0730	2300	11	99	36	170	6.9	--	188	0	365
20...	0730	2170	12	103	38	190	7.4	--	192	0	385
27...	0730	1870	11	99	36	175	7.5	--	196	0	365
SEP.											
04...	0730	1290	12	102	39	190	6.7	--	200	0	375
10...	0730	1370	12	105	38	190	6.8	--	196	0	375
17...	0730	1330	12	106	38	195	6.7	--	200	0	380
24...	0730	1330	12	106	38	195	6.3	--	202	0	380

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

EXTREMES.--1972-73:
Specific conductance: Maximum, 2,150 micromhos Aug. 31; minimum, 1,320 micromhos Mar. 28.

Period of record:
Specific conductance (1969-73): Maximum, 2,250 micromhos Dec. 9, 1969; minimum, 1,310 micromhos Oct. 1, 1971.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TUR-BID-ITY (JTU)
OCT.											
02...	200	--	1120	1080	1.52	420	250	--	1720	8.1	--
10...	165	--	980	955	1.33	405	250	--	1530	8.0	--
16...	252	--	1280	1230	1.74	490	280	--	1970	8.1	--
24...	230	--	1230	1170	1.67	490	290	--	1860	8.0	--
30...	260	--	1260	1240	1.71	470	270	--	1980	8.1	--
NOV.											
06...	240	--	1210	1170	1.65	450	260	4.7	1840	8.0	--
13...	230	--	1150	1130	1.56	460	260	4.6	1800	8.0	--
20...	220	--	1130	1130	1.54	455	270	4.3	1780	8.1	--
27...	250	--	1250	1230	1.70	475	270	4.8	1940	8.0	--
DEC.											
04...	235	--	1190	1170	1.62	460	265	4.6	1860	8.0	--
11...	182	--	1010	1010	1.37	410	246	4.0	1590	8.1	--
18...	185	--	1030	1030	1.40	415	248	4.0	1620	8.1	--
26...	230	--	1170	1160	1.59	450	270	4.5	1830	8.1	--
JAN.											
02...	180	--	1010	992	1.37	410	246	3.9	1570	8.1	--
08...	195	--	1060	1030	1.44	420	250	4.0	1620	8.1	--
15...	195	--	1080	1060	1.47	420	252	4.0	1660	8.1	--
22...	218	--	1150	1120	1.56	440	256	4.3	1760	8.1	--
29...	220	--	1130	1120	1.54	440	260	4.3	1770	8.1	--
FEB.											
05...	215	--	1150	1110	1.56	440	260	4.4	1770	8.1	--
12...	192	--	1050	1030	1.43	420	252	4.0	1630	8.1	5
20...	202	--	1100	1070	1.50	430	256	4.2	1690	8.1	6
26...	195	--	1070	1060	1.46	420	261	4.0	1660	8.1	3
MAR.											
05...	180	--	992	985	1.35	400	238	3.9	1550	8.1	2
12...	162	--	952	928	1.29	385	228	3.7	1470	8.1	3
19...	165	--	974	951	1.32	395	232	3.7	1500	8.1	1
26...	150	--	884	904	1.20	380	226	3.6	1420	8.1	1
APR.											
02...	162	--	928	916	1.26	380	224	3.7	1440	8.2	2
09...	165	--	920	920	1.25	385	228	3.7	1450	8.1	1
16...	165	--	938	921	1.28	385	228	3.6	1460	8.2	2
23...	165	--	918	929	1.25	390	231	3.6	1460	8.0	1
30...	180	--	1010	991	1.37	410	242	3.9	1560	8.0	1
MAY											
07...	200	--	1020	1010	1.39	405	228	4.1	1610	8.1	12
14...	205	--	944	901	1.28	355	180	4.0	1490	8.1	8
21...	208	--	856	838	1.16	330	156	4.0	1380	8.1	60
29...	210	--	792	776	1.08	295	121	4.1	1320	8.0	140
JUNE											
04...	215	--	848	808	1.15	310	133	4.1	1370	8.1	75
11...	265	--	1140	1090	1.55	415	222	4.7	1770	8.1	30
18...	192	--	964	937	1.31	370	201	4.1	1510	8.1	5
25...	210	--	880	887	1.20	330	158	4.3	1460	8.1	40
JULY											
02...	190	--	956	961	1.30	390	220	4.0	1540	8.1	5
09...	195	--	1000	993	1.36	400	238	4.0	1580	8.1	3
16...	185	.5	990	977	1.35	400	240	3.9	1560	8.1	1
23...	185	.6	984	981	1.34	400	242	3.9	1560	8.1	5
30...	172	.5	948	946	1.29	395	244	3.7	1500	8.1	1
AUG.											
06...	178	.7	974	967	1.32	400	244	3.8	1530	8.1	6
13...	170	.6	962	952	1.31	395	241	3.7	1510	8.1	2
20...	200	.8	1050	1020	1.43	415	258	4.1	1620	8.1	10
27...	170	.6	984	962	1.34	395	234	3.8	1520	8.1	2
SEP.											
04...	198	.6	1010	1020	1.37	415	251	4.1	1610	8.2	5
10...	205	.8	1020	1030	1.40	420	260	4.0	1640	8.0	1
17...	205	.6	1060	1060	1.41	420	256	4.1	1650	8.1	2
24...	205	.6	1060	1060	1.44	420	254	4.1	1650	8.1	5

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	TIME	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL ARSENIC IN BOTTOM DEPOSITS (UG/G)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CADMIUM IN BOTTOM DEPOSITS (UG/G)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL CHROMIUM IN BOTTOM DEPOSITS (UG/G)	DISSOLVED COBALT (CO) (UG/L)	TOTAL COBALT (CO) (UG/L)
MAY 16...	0730	5	5	--	0	0	--	10	10	--	0	20
MAY 23...	1400	--	--	4	--	--	1	--	--	2	--	--

DATE	TOTAL COBALT IN BOTTOM DEPOSITS (UG/G)	DISSOLVED COPPER (CU) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM DEPOSITS (UG/G)	DISSOLVED IRON (FE) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL IRON IN BOTTOM DEPOSITS (UG/G)	DISSOLVED LEAD (PB) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM DEPOSITS (UG/G)	DISSOLVED MANGANESE (MN) (UG/L)
MAY 16...	--	10	10	--	20	1200	--	1	<100	--	220
MAY 23...	4	--	--	3	--	--	2300	--	--	<10	--

DATE	TOTAL MANGANESE (MN) (UG/L)	TOTAL MANGANESE IN BOTTOM DEPOSITS (UG/G)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL MERCURY IN BOTTOM DEPOSITS (UG/G)	DISSOLVED SELENIUM (SE) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SELENIUM IN BOTTOM DEPOSITS (UG/G)	DISSOLVED ZINC (ZN) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM DEPOSITS (UG/G)
MAY 16...	350	--	.0	.0	--	8	10	--	10	30	--
MAY 23...	--	1500	--	--	.0	--	--	0	--	--	11

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITROGEN (N) (MG/L)	TOTAL NITROGEN (NO3) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL KJEL. NITROGEN IN BOTTOM DEP. (MG/KG)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. DEP. (MG/KG)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS IN BOTTOM DEPOSITS (MG/KG)	ORGANIC CARBON IN BED MATERIAL (C) (G/KG)
APR. 19...	0730	2530	.70	3.1	.46	--	.24	--	.06	--	--
MAY 16...	0730	--	.95	4.2	.87	--	.08	--	.16	--	--
JUNE 20...	0745	1910	72	3.2	.55	--	.17	--	.15	--	--
AUG. 23...	0730	2660	.67	3.0	.46	--	.21	--	.05	--	--
SEP. 19...	0800	1290	.48	2.1	.28	--	.20	--	.06	--	--
MAY 23...	1400	-	--	--	--	300	--	7.0	--	190	0.8

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
OCT.									
18...	0730	--	--	--	--	--	--	1200	--
19...	0750	758	1850	7.8	22.0	16.0	7.5	--	--
NOV.									
15...	0800	--	--	--	--	--	--	200	--
16...	0800	740	1800	7.6	16.5	10.0	7.7	--	--
DEC.									
13...	0800	--	--	--	8.5	--	--	54	--
14...	0815	1580	1700	8.1	11.0	8.5	10.8	--	--
JAN.									
17...	0800	--	--	--	--	--	--	40	--
18...	0800	1580	1650	8.1	14.5	5.5	10.0	--	--
FEB.									
13...	0800	--	--	--	--	--	--	67	1400
14...	0800	1460	1620	7.8	14.0	10.5	8.8	--	--
MAR.									
20...	0800	--	--	--	--	--	--	67	350
21...	0800	3000	1460	7.8	16.0	11.0	8.3	--	--
APR.									
18...	0800	--	--	--	--	--	--	67	290
19...	0730	2520	1410	7.8	17.5	12.0	7.0	--	--
MAY									
15...	0800	1330	--	--	--	--	--	2000	1400
16...	0730	1360	1420	7.9	24.0	29.0	7.6	--	--
21...	0730	--	--	--	--	--	--	400	1400
JUNE									
19...	0730	1920	--	--	--	--	--	3600	1700
20...	0745	1940	1480	7.7	25.0	29.0	5.4	--	--
JULY									
25...	0730	2370	--	--	--	--	--	280	72
26...	0800	2370	1480	7.8	27.0	29.0	6.6	--	--
AUG.									
22...	0730	1940	--	--	--	--	--	240	264
23...	0730	2660	1390	8.1	34.5	28.5	7.7	--	--
SEP.									
18...	0730	1310	--	--	--	--	--	170	290
19...	0800	1290	1590	7.9	23.0	25.0	7.1	--	--

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1690	1930	1990	1600	1740	1620	1420	1580	1330	1550	1480	1590
2	1720	1870	1980	1570	1720	1570	1440	1540	1340	1540	1480	1620
3	1660	1840	1870	1580	1710	1540	1380	1560	1330	1540	1480	1620
4	1700	1840	1860	1570	1730	1500	1390	1580	1370	1560	1490	1610
5	1690	1820	1830	1610	1770	1550	1370	1550	1370	1530	1500	1620
6	1590	1840	1820	1570	1650	1520	1400	1740	1340	1550	1530	1630
7	1410	1770	1640	1590	1660	1500	1450	1610	1340	1570	1600	1630
8	1330	1760	1640	1620	1650	1500	1440	1620	1350	1560	1520	1640
9	1320	1770	1620	1610	1660	1460	1450	1580	1560	1580	1550	1640
10	1530	1780	1600	1610	1590	1450	1470	1520	1660	1570	1540	1640
11	1680	1790	1590	1610	1620	1470	1450	1500	1770	1610	1550	1640
12	1780	1790	1610	1600	1630	1470	1420	1520	1720	1590	1530	1630
13	1950	1800	1600	1660	1590	1460	1440	1490	1600	1600	1510	1750
14	1920	1800	1590	1640	1590	1450	1460	1490	1570	1620	1480	1680
15	1890	1830	1610	1660	1580	1420	1480	1470	1600	1620	1460	1620
16	1970	1840	1560	1670	1650	1480	1460	1460	1640	1560	1460	1640
17	1920	1790	1630	1680	1660	1470	1470	1450	1550	1570	1520	1650
18	1900	1700	1620	1640	1660	1500	1510	1440	1510	1590	1450	1650
19	1920	1790	1580	1700	1680	1500	1450	1440	1470	1550	1490	1650
20	1880	1780	1660	1740	1690	1470	1460	1420	1440	1590	1620	1630
21	1580	1890	1730	1800	1620	1470	1460	1380	1430	1580	1480	1670
22	1730	1910	1750	1760	1600	1420	1490	1380	1450	1560	1520	1650
23	1790	1920	1750	1800	1490	1410	1460	1360	1470	1560	1340	1640
24	1860	1960	1770	1750	1550	1450	1470	1390	1500	1570	1440	1650
25	1960	1880	---	1760	1600	1410	1460	1400	1460	1480	1480	1560
26	1950	1900	1830	1760	1660	1420	1450	1370	1460	1510	1530	1580
27	1950	1940	1890	1770	1710	1360	1460	1350	1450	1490	1520	1640
28	1960	1930	1750	1780	1690	1320	1450	1350	1520	1480	1540	1650
29	1950	1950	1700	1770	---	1360	1460	1320	1560	1540	1550	1650
30	1980	1950	1610	1770	---	1370	1560	1320	1520	1500	1500	1660
31	1940	---	1620	1740	---	1360	---	1370	---	1500	2130	---
MEAN	1780	1850	1710	1680	1650	1460	1450	1470	1490	1560	1520	1640
YEAR	MAX	2130	MIN	1320	MEAN	1600						

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	ALDRIN (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DIELDRIN (UG/L)	ENDRIN (UG/L)	HEPTACHLOR (UG/L)	HEPTACHLOR EPOXIDE (UG/L)	LINDANE (UG/L)
OCT. 19...	0750	758	.00	.00	.00	.00	.00	.00	.00	.00	.00
NOV. 16...	1100	740	.00	.00	.00	.00	.00	.00	.00	.00	.00
DEC. 14...	0815	1580	.00	.00	.00	.00	.00	.00	.00	.00	.00
JAN. 18...	0810		.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB. 14...	0800	1460	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAR. 21...	0800	3000	.00	.00	.00	.00	.00	.00	.00	.00	.00
APR. 19...	0730	2520	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY 16...	0730	1360	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUNE 20...	0745	1940	.00	.00	.00	.00	.00	.00	.00	.00	.00
JULY 26...	0800	2370	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG. 23...	0730	2660	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	CHLORDANE (UG/L)	DIAZINON (UG/L)	MALATHION (UG/L)	METHYL PARATHION (UG/L)	PARATHION (UG/L)	PCB (UG/L)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)	TOXAPHENE (UG/L)
OCT. 19...	.0	--	--	--	--	.0	.39	.00	.00	--
NOV. 16...	.0	--	--	--	--	.0	.05	.00	.00	--
DEC. 14...	.0	--	--	--	--	.0	.00	.00	.00	.0
JAN. 18...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
FEB. 14...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
MAR. 21...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
APR. 19...	.0	.00	.00	.00	.00	.0	.02	.00	.00	.0
MAY 16...	.0	.01	.00	.00	.00	.0	.06	.00	.00	.0
JUNE 20...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
JULY 26...	.0	.01	.00	.00	.00	.0	.00	.00	.00	.0
AUG. 23...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0

09522200 COLORADO RIVER AT SOUTHERLY INTERNATIONAL BOUNDARY, NEAR SAN LUIS, ARIZ.

LOCATION.--Lat 32°29'48", long 114°48'48", at gaging station on right bank, in Mexico, 0.2 mi (0.3 km) upstream from southerly international boundary, 2 mi (3 km) west of San Luis, Ariz., 19.4 mi (31.2 km) downstream from Morelos Dam, and 20.5 mi (33.0 km) downstream from northerly international boundary.

DRAINAGE AREA.--243,000 mi^2 (629,400 km^2), approximately.

PERIOD OF RECORD.--October 1968 to September 1973.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT. 03...	1130	194	27	110	240	110	1000	8.9	358
NOV. 07...	1130	254	28	30	230	98	980	8.9	358
DEC. 05...	1215	296	25	40	230	89	860	8.5	341
JAN. 02...	1150	230	28	9	200	86	760	8.7	369
FEB. 06...	1220	267	29	20	230	100	1100	9.9	345
MAR. 09...	1015	246	26	9	200	80	770	.2	353
APR. 03...	1110	237	26	9	200	84	790	8.9	344
MAY 01...	1015	226	27	20	220	100	1000	8.2	339
JUNE 05...	0905	246	25	9	220	95	840	8.4	347
JULY 03...	0830	220	27	10	210	97	890	8.5	338
AUG. 07...	0950	227	25	10	210	96	950	8.4	313
SEP. 04...	1155	218	26	10	210	96	960	9.6	327

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DIS_SOLVED NITRATE (NO3) (MG/L)	DIS_SOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT. 03...	0	980	1500	3.0	--	--	2.4	2000	4080
NOV. 07...	0	940	1400	6.9	10	.0	2.3	2300	3960
DEC. 05...	0	870	1100	2.6	8.8	.0	2.0	1700	3430
JAN. 02...	0	880	990	2.8	11	.0	2.6	1400	--
FEB. 06...	0	960	1400	2.1	8.8	.0	2.0	1900	3930
MAR. 09...	0	860	960	2.4	11	.0	2.4	1500	3140
APR. 03...	0	940	1000	2.4	10	.0	2.3	1500	3170
MAY 01...	0	980	1300	1.9	8.4	.0	1.9	2000	3860
JUNE 05...	0	850	1200	2.4	5.7	.0	1.3	1700	3590
JULY 03...	0	920	1200	2.9	9.2	.0	2.1	1600	3500
AUG. 07...	0	920	1300	1.8	7.0	.1	1.6	1700	3660
SEP. 04...	0	870	1300	1.8	--	--	1.6	1600	3600

09522200 COLORADO RIVER AT SOUTHERLY INTERNATIONAL BOUNDARY, NEAR SAN LUIS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 03...	4060	5.55	1100	760	13	6390	8.1	21.5
NOV. 07...	3890	5.39	980	680	14	6040	7.5	16.5
DEC. 05...	3370	4.66	940	660	12	5340	7.6	15.5
JAN. 02...	3160	4.30	850	550	11	4900	7.8	12.0
FEB. 06...	4020	5.34	990	700	15	6160	7.5	19.0
MAR. 09...	3100	4.27	830	540	12	4850	8.0	16.5
APR. 03...	3240	4.31	850	560	12	4920	7.6	19.0
MAY 01...	3820	5.25	960	680	14	5930	7.7	19.5
JUNE 05...	3430	4.88	940	660	12	5530	7.8	25.0
JULY 03...	3530	4.76	920	650	13	5470	7.8	28.5
AUG. 07...	3670	4.98	920	660	14	5670	7.4	29.5
SEP. 04...	3640	4.90	920	650	14	5650	7.8	26.5

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT. 19...	1025	E280	5900	8.1	22.0	19.5	8.3
JAN. 18...	1120	E220	4980	8.0	17.0	15.0	10.0
APR. 19...	1110	225	6000	7.9	20.5	22.0	9.4
JULY 26...	1145	234	4800	8.3	31.0	40.5	14.3

09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, ARIZ.-CALIF.

LOCATION.--Lat 32°52'34", long 114°27'18", in SE¼SW¼ sec.30, T.6 S., R.21 W., Gila and Salt River meridian, in Arizona, Yuma County, at gaging station on right bank, 0.6 mi (1.0 km) downstream from intake at east end of Imperial Dam.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1973 (partial-record station).
Water temperatures: January 1956 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 30.0°C on several days during July and August; minimum, 9.0°C Dec. 30 to Jan. 2 (lower temperatures may have occurred during period of no daily record in January).

Period of record:
Water temperatures: Maximum, 33.0°C Aug. 29-31, 1970; minimum, 7.0°C Jan. 13-17, 1964, Jan. 4-7, 1971.

REMARKS.--Temperature probe above water surface Nov. 24 to Dec. 1, Dec. 25. No flow Nov. 24-30. Temperature recorder inoperative Oct. 1, Jan. 3-31. Unpublished chemical analyses (partial record) for water years 1965-67 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
19...	1610	194	12	20	100	37	190	5.1	203
JAN.									
03...	1145	886	8.5	9	94	34	150	5.0	178
APR.									
03...	0845	--	9.9	9	87	30	120	4.9	171
JULY									
18...	1145	1760	9.9	20	90	32	130	5.0	169

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT.									
19...	0	410	180	.6	--	--	.10	240	1080
JAN.									
03...	0	350	130	.4	1.5	.0	.33	180	972
APR.									
03...	0	310	110	.5	1.5	.0	.34	180	811
JULY									
18...	0	350	120	.5	.90	.0	.21	170	869

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT.								
19...	1040	1.47	400	240	4.1	1700	8.1	--
JAN.								
03...	863	1.32	370	230	3.4	1340	8.2	8.0
APR.								
03...	760	1.10	340	200	2.8	1170	7.9	15.5
JULY								
18...	822	1.18	360	220	3.0	1280	8.0	28.5

09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, ARIZ.-CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	14.5	14.5	---	---	9.0	9.0	12.0	12.0	17.0	16.0
2	24.0	24.0	14.0	13.5	14.0	12.0	9.0	9.0	12.0	12.0	18.0	17.0
3	24.0	23.0	14.0	14.0	12.0	12.0	---	---	12.0	12.0	18.0	18.0
4	23.0	22.0	14.0	14.0	12.0	12.0	---	---	12.0	12.0	18.0	17.0
5	23.0	23.0	15.0	14.5	12.0	12.0	---	---	12.0	12.0	17.0	15.0
6	23.0	22.0	15.5	15.0	12.0	12.0	---	---	13.0	12.0	15.0	15.0
7	24.0	22.0	15.5	15.5	12.0	12.0	---	---	13.0	13.0	15.0	14.0
8	25.0	21.0	15.5	15.5	12.0	12.0	---	---	13.0	13.0	14.0	14.0
9	24.0	23.0	15.5	15.5	12.0	11.5	---	---	14.0	13.0	14.0	14.0
10	24.0	24.0	15.5	15.5	11.5	11.5	---	---	14.0	14.0	14.0	14.0
11	24.0	24.0	15.5	15.0	11.5	11.5	---	---	14.0	14.0	14.0	14.0
12	24.5	24.0	15.0	14.0	11.5	11.5	---	---	14.0	14.0	14.0	14.0
13	24.5	24.0	14.0	14.0	11.5	11.5	---	---	14.0	14.0	15.0	14.0
14	24.5	24.0	14.0	14.0	11.5	11.5	---	---	14.0	14.0	14.0	14.0
15	25.0	24.5	14.5	14.0	11.5	11.5	---	---	14.0	14.0	14.0	14.0
16	24.5	24.0	14.5	14.5	11.5	11.5	---	---	14.0	14.0	15.0	14.0
17	24.0	23.5	14.5	14.5	11.5	11.5	---	---	14.0	14.0	15.0	15.0
18	23.5	21.5	14.5	14.5	11.5	11.5	---	---	14.0	14.0	16.0	15.0
19	21.5	21.0	14.5	14.5	11.5	11.5	---	---	14.0	14.0	16.0	16.0
20	21.0	20.5	14.5	14.5	11.5	11.0	---	---	14.0	14.0	16.0	16.0
21	20.5	19.5	14.0	14.0	11.0	11.0	---	---	14.0	14.0	16.0	16.0
22	20.0	18.5	14.0	14.0	11.0	11.0	---	---	14.0	12.0	16.0	15.0
23	19.5	19.5	14.0	13.0	11.0	11.0	---	---	12.0	12.0	15.0	14.0
24	19.5	19.5	---	---	11.0	11.0	---	---	14.0	12.0	15.0	14.0
25	19.5	19.5	---	---	---	---	---	---	14.0	14.0	16.0	15.0
26	19.5	19.0	---	---	11.0	10.0	---	---	16.0	14.0	16.0	16.0
27	19.0	19.0	---	---	10.0	10.0	---	---	16.0	16.0	16.0	16.0
28	19.0	18.5	---	---	10.0	10.0	---	---	16.0	16.0	16.0	16.0
29	18.5	18.5	---	---	10.0	9.5	---	---	---	---	16.0	14.0
30	18.5	17.0	---	---	9.5	9.0	---	---	---	---	14.0	14.0
31	17.0	14.5	---	---	9.0	9.0	---	---	---	---	15.0	14.0
MONTH	25.0	14.5	---	---	14.0	9.0	---	---	16.0	12.0	18.0	14.0

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.0	15.0	21.0	20.0	26.0	25.5	29.0	29.0	29.0	29.0	26.0	25.5
2	16.0	16.0	21.0	20.0	26.0	25.0	29.0	29.0	29.0	29.0	26.0	25.5
3	16.0	16.0	21.0	21.0	25.5	25.0	29.5	29.0	30.0	29.0	26.0	25.5
4	16.0	16.0	22.0	21.0	25.5	25.0	30.0	29.0	30.0	29.0	26.0	25.5
5	16.0	16.0	22.0	21.0	26.0	25.5	30.0	29.0	30.0	29.5	26.0	25.5
6	16.0	16.0	21.0	20.0	27.5	26.0	30.0	29.0	30.0	29.0	26.5	25.5
7	17.0	16.0	21.0	21.0	28.5	26.5	29.0	28.5	29.0	28.5	26.5	25.5
8	17.0	16.0	22.0	21.0	29.0	28.0	29.0	29.0	29.0	28.5	26.0	25.5
9	16.0	16.0	24.0	22.0	29.0	28.5	29.0	29.0	29.0	29.0	26.5	26.0
10	16.0	16.0	24.0	24.0	29.0	28.5	30.0	29.0	29.0	28.5	26.0	25.0
11	18.0	16.0	24.0	24.0	28.5	27.0	30.0	29.0	29.0	29.0	26.0	25.5
12	19.0	18.0	24.0	24.0	27.5	25.5	29.0	29.0	30.0	29.0	26.0	25.5
13	19.0	19.0	24.0	24.0	25.5	25.0	29.0	29.0	30.0	29.5	26.0	25.5
14	19.0	18.0	24.0	24.0	25.5	25.0	29.0	29.0	29.5	29.0	26.0	25.5
15	18.0	18.0	24.0	24.0	25.5	24.5	29.0	29.0	30.0	29.5	26.5	26.0
16	18.0	18.0	25.0	24.0	25.0	24.5	29.0	29.0	30.0	30.0	26.5	26.0
17	18.0	18.0	26.0	25.0	25.0	24.5	29.0	29.0	30.0	29.5	26.0	25.5
18	18.0	18.0	26.0	26.0	25.5	24.5	29.0	29.0	30.0	30.0	26.0	25.5
19	18.0	18.0	26.0	26.0	25.5	25.5	29.0	29.0	30.0	30.0	25.5	24.5
20	18.0	18.0	26.0	26.0	26.0	25.5	29.0	29.0	30.0	29.5	25.0	24.5
21	18.0	18.0	26.0	25.0	26.5	25.5	29.0	28.0	29.5	29.0	25.0	25.0
22	18.0	18.0	26.0	25.0	27.0	26.5	28.5	28.0	29.5	29.5	25.0	25.0
23	20.0	18.0	25.0	25.0	28.5	27.0	28.5	27.0	29.5	29.0	25.0	25.0
24	20.0	20.0	25.0	25.0	29.0	28.0	28.5	28.0	29.5	28.5	25.0	25.0
25	21.0	20.0	25.0	25.0	29.0	28.5	29.0	28.0	28.5	28.0	25.0	25.0
26	22.0	21.0	25.0	24.0	29.0	28.5	29.5	29.0	28.0	26.5	25.0	24.0
27	23.0	22.0	25.0	24.0	29.0	28.5	29.5	29.0	26.5	25.5	24.0	23.0
28	23.0	22.0	26.0	25.0	29.0	29.0	30.0	29.0	26.0	25.5	23.5	23.0
29	22.0	22.0	26.0	26.0	29.0	29.0	30.0	29.5	26.0	25.5	24.0	23.5
30	22.0	20.0	26.0	26.0	29.0	28.5	29.5	29.0	26.0	25.5	24.5	24.0
31	---	---	26.0	26.0	---	---	29.0	28.0	26.5	25.5	---	---
MONTH	23.0	15.0	26.0	20.0	29.0	24.5	30.0	27.0	30.0	25.5	26.5	23.0
YEAR	30.0	9.0										

09529160 SOUTH GILA PUMP OUTLET CHANNEL NO. 3 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°43'04", long 114°30'12", in NW¼SE¼ sec.22, T.8 S., R.22 W., Yuma County, at gaging station 0.5 mi (0.8 km) upstream from outlet to Gila River, and 6 mi (10 km) east of Yuma.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--No flow for many days of most months. Unpublished miscellaneous chemical analyses for water years 1965-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT. 24...	1430	.24	14	20	95	37	190	6.4	145
NOV. 02...	1015	1.6	11	20	91	35	170	5.1	181
JAN. 03...	1120	.01	5.6	20	85	37	200	5.7	135
APR. 02...	0305	46	27	9	280	110	750	9.4	385
JULY 01...	0300	8.5	28	0	170	65	330	7.6	354

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS_ SOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT. 24...	8	430	190	.6	--	--	.04	270	--
NOV. 02...	0	380	150	.7	--	--	.15	210	932
JAN. 03...	0	410	170	.5	.20	.0	.04	250	--
APR. 02...	0	580	1400	.7	3.4	.0	.78	870	3300
JULY 01...	0	320	600	.8	2.6	.0	.60	420	1780

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 24...	1040	1.41	390	260	4.2	1590	8.5	29.0
NOV. 02...	933	1.27	370	220	3.8	1467	8.3	16.0
JAN. 03...	981	1.33	360	250	4.6	1500	7.8	12.0
APR. 02...	3350	4.49	1200	840	9.6	5410	7.7	18.0
JULY 01...	1700	2.42	690	400	5.5	2890	7.8	25.5

09529240 SOUTH GILA PUMP OUTLET CHANNEL NO. 2 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'31", long 114°31'45", in NW¼SW¼ sec.28, T.8 S., R.22 W., Yuma County, at gaging station 0.6 mi (1.0 km) upstream from outlet to Gila River, and 4 mi (6 km) east of Yuma.

PERIOD OF RECORD.--October 1968 to September 1973.

REMARKS.--No flow for many days during October, July, August, and September. Unpublished miscellaneous chemical analyses for water years 1965-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
04...	1015	5.6	27	10	83	32	350	4.5	293
NOV.									
02...	1000	1.7	24	10	82	34	300	4.9	260
DEC.									
04...	1030	--	28	20	86	32	340	5.0	295
JAN.									
03...	1145	42	26	9	120	50	490	5.8	301
FEB.									
02...	1000	7.7	28	20	94	34	360	5.2	296
MAR.									
02...	0900	21	28	9	100	38	400	5.3	301
APR.									
02...	0245	42	26	9	120	49	460	5.8	288
MAY									
01...	0240	8.4	27	0	84	31	350	4.7	287
JUNE									
04...	0205	7.9	27	9	84	31	410	4.5	289
JULY									
01...	0240	19	27	20	93	34	360	4.9	288

09529240 SOUTH GILA PUMP OUTLET CHANNEL NO. 2 NEAR YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT. 04...	0	450	290	1.2	--	--	4.3	770	1390
NOV. 02...	0	450	260	1.1	--	--	2.4	570	1260
DEC. 04...	0	480	300	1.3	15	.2	3.5	760	1400
JAN. 03...	0	460	570	.9	6.0	.1	1.4	770	--
FEB. 02...	0	480	330	1.0	13	.3	3.1	810	1480
MAR. 02...	0	460	410	1.1	11	.3	2.7	340	1590
APR. 02...	0	450	570	1.0	6.0	.1	1.4	740	1880
MAY 01...	0	470	290	1.2	15	.2	3.5	290	1370
JUNE 04...	0	480	300	1.2	15	.2	3.5	710	1580
JULY 01...	0	450	330	1.2	11	.2	2.5	790	1440

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 04...	1400	1.89	340	99	8.3	2220	8.1	25.0
NOV. 02...	1300	1.71	340	130	7.0	2050	8.1	20.5
DEC. 04...	1450	1.90	350	100	8.0	2200	7.9	24.0
JAN. 03...	1880	2.56	510	260	9.5	3010	7.9	23.0
FEB. 02...	1510	2.01	370	130	8.1	2330	7.9	22.0
MAR. 02...	1610	2.16	410	160	8.6	2540	7.9	23.0
APR. 02...	1840	2.56	500	270	8.9	3010	7.8	18.0
MAY 01...	1430	1.86	340	100	8.3	2190	7.8	--
JUNE 04...	1510	2.15	340	100	9.7	2200	7.9	25.5
JULY 01...	1450	1.96	370	140	8.1	2320	7.9	25.0

09529300 WELLTON-MOHAWK MAIN OUTLET DRAIN NEAR YUMA, ARIZ.

LOCATION.--Lat 32°44'35", long 114°26'02", in NW¼NE¼ sec.17, T.8 S., R.21 W., Yuma County, at gaging station, 8 mi (13 km) upstream from outlet to Gila River, and 11 mi (18 km) east of Yuma.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--No flow July 23-25. Unpublished chemical analyses (continuing record) for water years 1961-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED SODIUM PLUS POTASSIUM (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.											
02...	0240	298	23	262	109	--	1050	--	424	0	1010
09...	--	305	24	250	106	--	1040	--	420	0	1000
16...	0940	297	23	246	108	--	1040	--	416	0	990
23...	--	288	23	250	106	--	1010	--	416	0	980
30...	--	304	25	242	106	--	1020	--	426	0	990
NOV.											
06...	--	303	26	246	111	1050	--	8.1	418	0	1010
13...	--	302	24	254	104	1020	--	10	426	0	1000
20...	--	302	24	262	118	1060	--	10	424	0	1030
27...	--	304	23	262	109	1040	--	10	420	0	1020
DEC.											
04...	--	304	24	256	98	1020	--	10	420	0	1000
11...	--	307	24	262	113	1060	--	11	428	0	1030
18...	--	306	24	262	116	1040	--	10	424	0	1020
26...	0230	293	23	224	95	780	--	8.9	422	0	890
JAN.											
01...	--	291	23	224	93	780	--	9.3	420	0	860
08...	--	286	23	222	91	790	--	9.4	420	0	890
15...	--	287	24	228	90	790	--	9.3	420	0	890
22...	--	288	24	222	94	790	--	8.7	422	0	890
29...	--	298	24	226	91	790	--	9.4	424	0	890
FEB.											
05...	0240	311	24	266	116	1050	--	11	424	0	1020
12...	0245	307	25	258	109	1040	--	11	422	0	1000
19...	0305	311	24	218	91	810	--	9.0	418	0	900
26...	0200	296	24	210	96	800	--	8.9	422	0	900
MAR.											
05...	0240	298	25	206	96	800	--	9.2	424	0	890
12...	0330	297	25	212	90	800	--	9.2	418	0	890
19...	0250	303	25	262	118	1080	--	11	424	0	1030
26...	0235	300	25	258	118	1060	--	11	426	0	1010
APR.											
02...	0335	290	24	228	90	800	--	9.2	426	0	890
09...	0255	288	25	218	91	800	--	9.1	418	0	890
16...	0250	294	25	254	118	1060	--	11	428	0	1020
23...	0300	307	24	258	96	1000	--	10	426	0	980
30...	0130	303	24	246	99	990	--	11	420	0	970
MAY											
07...	0250	296	24	244	100	950	--	10	412	0	950
14...	0250	290	23	234	106	960	--	10	410	0	950
21...	0320	293	24	242	101	960	--	10	414	0	950
28...	0120	297	23	242	101	930	--	10	408	0	930
JUNE											
04...	0305	308	23	246	96	930	--	9.9	416	0	920
11...	0720	311	22	254	101	930	--	9.8	416	0	930
18...	0250	293	23	238	101	890	--	9.7	414	0	910
25...	0325	284	23	232	100	900	--	9.8	418	0	920
JULY											
02...	0325	297	24	232	102	900	--	9.7	412	0	910
09...	0230	298	24	238	99	870	--	9.6	414	0	900
16...	0230	251	24	262	113	960	--	11	416	0	960
23...	0315	15	24	206	89	825	--	8.8	398	0	880
30...	0240	219	23	230	106	940	--	9.5	396	0	940
AUG.											
06...	0200	284	25	236	110	980	--	9.9	424	0	940
13...	0435	304	24	244	105	980	--	9.9	424	0	950
20...	0810	121	23	214	91	900	--	10	408	0	900
27...	0205	238	21	242	106	920	--	10	410	0	900
SEP.											
03...	0255	297	21	240	107	970	--	10	416	0	930
10...	0215	306	24	228	110	960	--	10	384	0	930
17...	0205	227	24	232	107	960	--	9.8	424	0	930
24...	0450	310	24	236	102	950	--	9.7	420	0	920

09529300 WELLTON-MOHAWK MAIN OUTLET DRAIN NEAR YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.											
02...	1410	--	4220	4080	5.74	1100	750	--	6450	8.0	--
09...	1380	--	4160	4010	5.66	1060	720	--	6350	8.0	--
16...	1380	--	4030	4000	5.48	1060	720	--	6280	8.1	--
23...	1350	--	4130	3930	5.62	1060	720	--	6210	8.0	--
30...	1330	--	4060	3930	5.52	1040	690	--	6170	8.1	--
NOV.											
06...	1380	--	4060	4040	5.52	1070	730	14	6320	8.0	--
13...	1360	--	4050	3980	5.51	1060	710	14	6250	8.0	--
20...	1440	--	4310	4150	5.86	1140	790	14	6540	8.0	--
27...	1390	--	4200	4060	5.71	1100	760	14	6380	8.0	--
DEC.											
04...	1330	--	4040	3950	5.49	1040	696	14	6180	8.1	--
11...	1410	--	4210	4120	5.73	1120	769	14	6440	8.0	--
18...	1400	--	4170	4080	5.67	1130	782	13	6400	8.0	--
26...	980	--	3310	3210	4.50	950	604	11	5040	8.0	18.5
JAN.											
01...	980	--	3320	3180	4.52	940	596	11	5010	8.1	17.5
08...	990	--	3310	3230	4.50	930	586	11	5040	8.0	--
15...	1010	--	3350	3250	4.56	940	596	11	5140	8.0	--
22...	1010	--	3410	3250	4.64	940	594	11	5150	8.0	--
29...	1010	--	3420	3250	4.65	940	592	11	5140	8.0	20.0
FEB.											
05...	1450	--	4260	4150	5.79	1140	792	14	6570	8.0	20.0
12...	1400	--	4230	4050	5.75	1090	744	14	6450	8.0	17.0
19...	990	--	3290	3250	4.47	920	577	12	5100	8.0	21.0
26...	990	--	3340	3240	4.54	920	574	11	5120	8.0	21.0
MAR.											
05...	980	--	3250	3220	4.42	910	562	12	5060	8.1	19.5
12...	980	--	3200	3220	4.35	900	557	12	5060	8.0	18.0
19...	1480	--	4270	4220	5.81	1140	792	14	6600	8.0	21.0
26...	1440	--	4260	4140	5.79	1130	780	14	6520	8.1	20.0
APR.											
02...	1020	--	3290	3270	4.47	940	590	11	5150	8.1	16.5
09...	1010	--	3260	3250	4.43	920	577	11	5110	8.0	21.0
16...	1430	--	4180	4130	5.68	1120	769	14	6490	8.1	20.5
23...	1320	--	4030	3900	5.48	1040	690	13	6130	8.0	22.0
30...	1300	--	3990	3850	5.43	1020	676	13	6020	8.0	21.0
MAY											
07...	1250	--	3730	3730	5.07	1020	682	13	5860	8.0	--
14...	1270	--	3830	3760	5.21	1020	684	13	5890	8.0	--
21...	1260	--	3820	3750	5.20	1020	680	13	5880	8.0	25.5
28...	1250	--	3800	3690	5.17	1020	686	13	5810	8.0	26.0
JUNE											
04...	1240	--	3740	3670	5.09	1010	669	13	5760	8.0	--
11...	1260	--	3760	3710	5.11	1050	709	12	5820	8.0	22.0
18...	1180	--	3660	3560	4.98	1010	670	12	5590	8.1	23.5
25...	1180	--	3670	3570	4.99	990	647	12	5610	8.0	22.0
JULY											
02...	1180	1.7	3600	3570	4.90	1000	662	12	5610	8.0	23.5
09...	1160	1.8	3510	3510	4.77	1000	660	12	5540	8.0	26.0
16...	1320	1.8	3930	3860	5.34	1120	779	12	6090	8.0	26.0
23...	1010	1.8	3360	3240	4.57	880	554	12	5120	8.2	24.5
30...	1240	1.9	3810	3690	5.18	1010	686	13	5820	8.0	26.0
AUG.											
06...	1300	1.9	3960	3810	5.39	1040	692	13	5980	8.1	28.0
13...	1290	2.0	3890	3820	5.29	1040	692	13	6000	8.0	25.5
20...	1130	1.5	3650	3470	4.96	910	576	13	5490	8.0	25.5
27...	1270	1.6	3810	3680	5.18	1040	700	12	5830	8.1	23.5
SEP.											
03...	1300	1.5	3860	3790	5.25	1040	699	13	5950	8.1	23.5
10...	1290	1.6	3890	3750	5.29	1020	705	13	5900	7.9	26.5
17...	1260	1.6	3860	3740	5.25	1020	672	13	5890	8.1	23.5
24...	1250	1.7	3840	3700	5.22	1010	666	13	5810	8.1	22.0

09529360 SOUTH GILA PUMP OUTLET CHANNEL NO. 1 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'24", long 114°35'19", in SW¼NE¼ sec.30, T.8 S., R.22 W., Yuma County, at gaging station, 0.2 mi (0.3 km) upstream from outlet to Gila River, and 4 mi (6 km) east of Yuma.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1966-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
04...	1115	19	26	20	100	40	420	4.9	300
NOV.									
02...	0945	.93	26	10	97	44	440	5.1	297
DEC.									
04...	1100	16	26	9	120	46	450	6.1	290
JAN.									
03...	1200	54	24	9	150	59	530	6.2	300
FEB.									
02...	1015	16	26	20	130	48	450	5.8	295
MAR.									
02...	0920	34	28	9	140	58	490	6.2	307
APR.									
02...	0255	45	24	20	140	50	470	5.9	287
MAY									
01...	0225	17	25	9	120	49	460	5.5	287
JUNE									
04...	0215	36	25	9	120	52	470	5.5	288
JULY									
01...	0250	43	25	0	140	52	450	5.9	284
AUG.									
02...	0520	48	26	10	150	57	460	5.8	289
SEP.									
01...	0535	50	25	10	140	56	470	6.6	289

09529360 SOUTH GILA PUMP OUTLET CHANNEL NO. 1 NEAR YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT. 04...	0	530	420	1.4	--	--	1.7	790	1700
NOV. 02...	0	560	420	1.4	--	--	1.3	730	1760
DEC. 04...	0	570	470	1.2	4.3	.0	1.0	720	1830
JAN. 03...	0	530	640	.9	3.6	.0	.82	700	--
FEB. 02...	0	520	510	1.2	4.8	.0	1.1	690	1850
MAR. 02...	0	470	650	1.0	3.2	.0	.75	670	1990
APR. 02...	0	530	570	1.1	4.1	.0	.94	680	1900
MAY 01...	0	460	560	1.2	4.2	.0	.96	720	1800
JUNE 04...	0	500	560	1.1	2.5	.0	.58	650	1900
JULY 01...	0	520	570	1.1	3.0	.4	.81	690	1850
AUG. 02...	0	490	660	1.0	2.3	.2	.58	640	2000
SEP. 01...	0	480	640	.9	--	--	.63	640	2010

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 04...	1700	2.31	410	170	9.0	2660	8.3	25.0
NOV. 02...	1750	2.39	420	180	9.3	2750	8.3	17.0
DEC. 04...	1840	2.49	490	250	8.9	2800	8.0	23.5
JAN. 03...	2100	2.86	620	370	9.3	3240	7.9	23.0
FEB. 02...	1850	2.52	520	280	8.6	2920	8.1	22.0
MAR. 02...	2000	2.71	590	340	8.8	3250	7.8	23.0
APR. 02...	1940	2.58	560	320	8.7	3070	7.9	18.0
MAY 01...	1830	2.45	500	270	8.9	2940	8.0	21.0
JUNE 04...	1880	2.58	510	280	9.0	2990	7.8	25.5
JULY 01...	1910	2.52	560	330	8.2	3070	7.8	25.0
AUG. 02...	2000	2.72	610	370	8.1	3210	7.6	21.5
SEP. 01...	1960	2.73	580	340	8.5	3210	7.8	23.5

09529440 SOUTH GILA PUMP OUTLET CHANNEL NO. 4 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'46", long 114°35'50", in NW¼NW¼ sec.26, T.8 S., R.23 W., Yuma County, at gaging station, 1.5 mi (2.4 km) upstream from outlet to Colorado River, and 1.5 mi (2.4 km) east of Yuma.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--No flow for many days of most months. Unpublished miscellaneous chemical analyses for water years 1966-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT. 04...	1245	1.0	24	10	260	100	710	8.4	336
MAR. 02...	0940	29	27	9	310	120	840	8.8	373
AUG. 02...	0445	28	26	10	320	130	830	7.8	354
SEP. 05...	0520	20	26	20	360	150	960	9.7	393

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT. 04...	0	620	1200	.7	--	--	.12	780	3330
MAR. 02...	0	650	1500	.6	.00	.0	.02	760	3720
AUG. 02...	0	640	1600	.5	.00	1.5	.44	770	3980
SEP. 05...	0	550	1800	.2	--	--	.06	790	4130

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 04...	3090	4.53	1100	780	9.5	5300	8.0	24.0
MAR. 02...	3640	5.06	1300	960	10	5900	7.5	24.0
AUG. 02...	3730	5.41	1300	1000	9.9	6070	7.4	23.0
SEP. 05...	4050	5.62	1500	1200	11	6720	7.5	24.0

09530000 RESERVATION MAIN DRAIN NO. 4 AT YUMA, ARIZ.

LOCATION.--Lat 32°44'09", long 114°37'16", in NW¼SE¼ sec.26, T.16 S., R.22 E., San Bernardino meridian, in California, Imperial County, at gaging station, at railroad culvert, 0.2 mi (0.3 km) upstream from crossing of U.S. Highway 80, and 0.7 mi (1.1 km) north of Yuma.

PERIOD OF RECORD.--October 1968 to September 1973.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
05...	1030	58	21	1500	150	46	210	5.0	261
NOV.									
02...	0905	50	22	20	150	50	220	5.1	275
DEC.									
04...	0820	44	22	9	160	48	230	5.6	285
JAN.									
04...	1000	42	21	0	160	49	240	5.1	289
FEB.									
02...	0855	43	22	20	160	50	230	5.5	289
MAR.									
02...	0950	52	23	9	150	47	230	5.3	278
APR.									
03...	1000	58	20	9	160	46	210	5.1	267
MAY									
01...	1130	48	22	9	160	49	230	5.3	281
JUNE									
05...	1330	40	22	9	160	50	210	5.0	282
JULY									
06...	1210	64	20	9	140	45	210	5.3	257
AUG.									
06...	0940	47	23	20	150	47	210	4.9	277
SEP.									
05...	1305	50	23	10	150	48	220	5.4	272

09530000 RESERVATION MAIN DRAIN NO. 4 AT YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT. 05...	0	490	250	.5	--	--	.37	320	1360
NOV. 02...	0	480	240	.6	--	--	.17	230	1370
DEC. 04...	0	520	260	.5	1.0	.1	.27	260	1390
JAN. 04...	0	510	260	.4	.80	.0	.21	250	1400
FEB. 02...	0	510	260	.7	.80	.0	.18	250	1430
MAR. 02...	0	480	250	.5	.80	.1	.21	260	1390
APR. 03...	0	470	240	.4	1.4	.0	.34	250	1340
MAY 01...	0	540	260	.5	1.0	.1	.26	260	1380
JUNE 05...	0	440	260	.5	.20	.1	.09	270	1380
JULY 06...	0	480	220	.6	.70	.2	.24	250	1320
AUG. 06...	0	490	250	.5	.50	.1	.15	240	1350
SEP. 05...	0	510	240	.4	--	--	.29	250	1310

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 05...	1300	1.85	560	350	3.8	2000	7.8	23.0
NOV. 02...	1300	1.86	580	350	4.0	1990	7.9	16.5
DEC. 04...	1390	1.89	600	360	4.1	2070	7.6	17.5
JAN. 04...	1390	1.90	600	360	4.3	2050	7.8	15.0
FEB. 02...	1380	1.94	600	370	4.1	2090	7.8	14.5
MAR. 02...	1320	1.89	570	340	4.2	1860	7.8	18.0
APR. 03...	1290	1.82	590	370	3.8	1530	8.0	17.5
MAY 01...	1410	1.88	600	370	4.1	2040	7.9	--
JUNE 05...	1290	1.88	610	370	3.7	2020	7.7	28.5
JULY 06...	1250	1.80	540	320	4.0	1870	7.8	28.0
AUG. 06...	1310	1.84	570	340	3.8	1930	7.8	24.0
SEP. 05...	1330	1.78	570	350	4.0	1990	7.9	27.0

09530200 YUMA MESA OUTLET DRAIN AT YUMA, ARIZ.

LOCATION.--Lat 32°43'48", long 114°39'27", in SE¼SW¼ sec.28, T.16 S., R.22 E., San Bernardino meridian, in Arizona, Yuma County, at gaging station, 0.3 mi (0.5 km) from outlet to Colorado River, and 0.5 mi (0.8 km) west of Joe Henry Memorial Park in Yuma, Ariz.

PERIOD OF RECORD.--Chemical analyses: July 1972 to September 1973.

REMARKS.--No flow Oct. 7-11, 21-23, Nov. 18, 19, Feb. 23, 24, Mar. 14, 15, May 22, 27, 28, 31.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
JULY												
18...	0805	--	25	10	98	31	320	4.8	242	0	420	320
31...	0830	87	27	10	97	31	310	4.2	242	0	430	320
AUG.												
14...	0835	--	26	20	98	32	320	5.2	243	0	420	330
29...	0800	100	25	10	97	31	320	2.5	244	0	420	330
SEP.												
05...	0745	100	26	20	99	32	320	4.3	244	0	420	330
11...	0810	100	26	10	97	30	320	4.6	247	0	420	330
18...	0830	99	26	10	99	31	330	4.5	245	0	510	330
25...	0810	98	26	20	110	32	310	4.9	247	0	410	340

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
JULY												
18...	.7	.84	500	1330	1340	1.81	370	170	7.2	2120	7.7	25.5
31...	.8	.78	500	1350	1340	1.84	370	170	7.0	2130	7.2	26.0
AUG.												
14...	.7	.72	520	1350	1360	1.84	380	180	7.2	2150	7.5	27.0
29...	.8	.56	490	1360	1350	1.85	370	170	7.2	2150	7.6	25.5
SEP.												
05...	.8	.68	510	1340	1360	1.82	380	180	7.2	2150	7.6	--
11...	.8	.57	510	1330	1350	1.81	370	160	7.3	2150	7.7	25.5
18...	.8	.58	510	1330	1450	1.81	370	170	7.4	2150	7.7	26.5
25...	.7	.63	520	1350	1360	1.84	410	200	6.7	2150	7.7	25.5

09530200 YUMA MESA OUTLET DRAIN AT YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)
OCT.									
02...	0800	98	25	10	96	32	320	4.5	243
16...	0810	101	27	20	95	32	310	4.7	243
25...	0815	101	25	10	93	30	330	5.2	243
30...	0845	100	26	20	99	32	320	5.1	242
NOV.									
06...	0820	92	26	20	97	32	310	4.6	245
13...	0830	100	26	10	94	31	320	4.7	247
27...	0915	99	12	9	99	31	310	5.1	246
DEC.									
04...	0835	99	26	9	98	31	290	5.0	247
11...	0900	100	26	9	99	32	300	4.6	250
18...	0815	97	26	9	99	31	330	4.8	250
26...	0815	96	26	9	98	31	340	4.8	251
JAN.									
02...	0815	96	26	9	98	31	320	4.9	261
08...	0835	96	27	9	100	31	330	4.9	250
15...	0835	95	26	0	99	33	320	5.4	255
22...	0850	95	27	30	99	31	300	5.3	252
29...	0900	95	26	30	97	33	310	5.1	252
FEB.									
05...	0845	95	26	30	99	32	320	5.1	249
12...	0855	109	27	9	97	32	330	4.8	249
20...	0845	94	25	30	99	33	320	5.0	217
26...	1005	86	25	20	92	32	340	4.8	263
MAR.									
05...	0855	95	25	9	98	32	320	5.2	252
12...	0900	51	25	9	98	31	320	4.8	249
19...	0910	95	25	60	97	37	340	4.9	251
26...	0745	94	25	20	100	32	310	4.8	243
APR.									
02...	0740	90	25	9	100	32	310	4.8	242
09...	0745	88	25	9	100	32	320	5.2	243
16...	0750	87	25	9	99	32	340	5.0	243
23...	0745	86	25	9	98	32	310	5.4	248
MAY									
01...	0740	87	25	9	100	33	320	4.6	240
07...	0845	87	25	9	100	32	320	4.8	239
14...	0845	92	25	0	100	31	350	4.6	241
JUNE									
04...	0715	31	27	9	110	31	320	4.7	227
11...	0720	93	26	20	99	31	320	5.0	244
18...	0715	84	25	0	98	31	350	4.6	255
25...	0715	93	26	9	98	31	320	5.0	243
JULY									
02...	0720	93	25	30	100	32	320	4.9	246
AUG.									
06...	0720	91	26	10	100	32	320	4.5	246
SEP.									
04...	0720	83	26	0	97	32	340	5.5	241

09530200 YUMA MESA OUTLET DRAIN AT YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS_SOLVED NITRATE (NO3) (MG/L)	DIS_SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
02...	0	400	340	.8	--	--	.73	530	1330
16...	0	390	330	.8	--	--	.68	490	1350
25...	0	410	330	.9	--	--	.64	500	1350
30...	0	460	340	.8	--	--	.66	520	1330
NOV.									
06...	0	410	330	.8	3.1	.0	.70	500	1340
13...	0	400	340	.7	2.8	.0	.63	480	1330
27...	0	390	340	.8	3.1	.0	.70	490	1360
DEC.									
04...	0	410	330	.8	3.0	.0	.68	500	1370
11...	0	390	340	.8	2.8	.0	.64	500	1340
18...	0	390	340	.8	3.1	.0	.71	510	1320
26...	0	400	340	.7	3.0	.0	.68	500	1350
JAN.									
02...	0	390	340	.7	3.3	.0	.75	490	1360
08...	0	400	340	.9	2.9	.0	.66	500	1370
15...	0	420	340	.8	2.8	.0	.64	500	1370
22...	0	390	340	.6	.30	.0	.06	520	1370
29...	0	390	330	.6	2.0	.0	.45	510	1360
FEB.									
05...	0	390	340	.6	2.7	.0	.61	490	1370
12...	0	400	340	.7	2.7	.0	.62	500	1370
20...	0	410	350	.7	2.7	.0	.62	480	1360
26...	0	430	300	.9	4.8	.0	1.1	560	1340
MAR.									
05...	0	410	350	.7	2.6	.0	.60	510	1380
12...	0	410	350	.8	2.7	.0	.60	500	1350
19...	0	390	340	.7	2.4	.0	.55	500	1350
26...	0	390	340	.8	2.7	.0	.60	490	1380
APR.									
02...	0	390	350	.7	2.7	.0	.62	430	1370
09...	0	390	350	.7	2.7	.0	.61	500	1340
16...	0	380	350	.7	2.9	.0	.65	490	1370
23...	0	380	360	.7	2.8	.0	.63	500	1340
MAY									
01...	0	420	350	.8	2.8	.0	.64	530	1340
07...	0	420	350	.7	2.7	.0	.61	470	1360
14...	0	410	360	.5	2.3	.0	.54	400	1330
JUNE									
04...	0	350	360	.6	2.8	.0	.64	400	--
11...	0	380	340	1.0	2.1	.0	.49	500	1320
18...	0	380	340	.9	2.7	.0	.61	580	1320
25...	0	420	350	.8	2.3	.0	.54	490	1360
JULY									
02...	0	390	340	.7	1.9	.0	.43	530	1320
AUG.									
06...	0	380	350	.7	2.2	.0	.50	440	1350
SEP.									
04...	0	400	340	.6	--	--	.69	430	1350

09530200 YUMA MESA OUTLET DRAIN AT YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
02...	1340	1.81	370	170	7.2	2150	7.8	24.5
16...	1310	1.84	370	170	7.0	2150	7.7	26.5
25...	1350	1.84	360	160	7.6	2150	7.9	25.5
30...	1410	1.81	380	180	7.2	2150	7.5	25.5
NOV.								
06...	1340	1.82	370	170	7.0	2160	7.7	25.5
13...	1340	1.81	360	160	7.3	2160	7.9	--
27...	1320	1.85	370	170	7.0	2160	7.0	26.5
DEC.								
04...	1320	1.86	370	170	6.5	2170	7.6	25.5
11...	1320	1.82	380	170	6.7	2160	7.3	25.0
18...	1350	1.80	370	170	7.4	2160	7.5	21.0
26...	1370	1.84	370	170	7.7	2170	7.8	--
JAN.								
02...	1350	1.85	370	160	7.2	2170	7.8	20.0
08...	1360	1.86	380	170	7.4	2170	7.7	26.5
15...	1380	1.86	380	170	7.1	2170	7.8	26.0
22...	1320	1.86	370	170	6.7	2170	7.8	26.5
29...	1320	1.85	380	170	6.9	2170	8.0	26.0
FEB.								
05...	1340	1.86	380	170	7.2	2180	7.7	26.0
12...	1360	1.86	370	170	7.4	2180	7.9	22.0
20...	1360	1.85	380	210	7.1	2180	7.8	24.0
26...	1360	1.82	360	150	7.8	2200	7.8	23.5
MAR.								
05...	1370	1.88	380	170	7.2	2180	7.7	25.0
12...	1370	1.84	370	170	7.2	2180	8.0	24.0
19...	1360	1.84	390	190	7.5	2170	7.7	23.5
26...	1330	1.88	380	180	6.9	2180	7.7	23.5
APR.								
02...	1340	1.86	380	180	6.9	2170	7.7	26.0
09...	1350	1.82	380	180	7.1	2170	7.8	24.5
16...	1360	1.86	380	180	7.6	2170	7.7	26.0
23...	1340	1.82	380	170	7.0	2170	7.7	25.5
MAY								
01...	1380	1.82	390	190	7.1	2170	7.8	26.0
07...	1380	1.85	380	190	7.1	2170	7.6	26.5
14...	1410	1.81	380	180	7.8	2180	7.8	27.0
JUNE								
04...	1320	1.80	400	220	6.9	2100	7.8	26.0
11...	1330	1.80	370	170	7.2	2150	7.4	25.5
18...	1360	1.80	370	160	7.9	2170	7.7	25.5
25...	1380	1.85	370	170	7.2	2170	7.1	25.5
JULY								
02...	1340	1.80	380	180	7.1	2170	7.8	26.0
AUG.								
06...	1340	1.84	380	180	7.1	2170	8.0	27.0
SEP.								
04...	1360	1.84	370	180	7.7	2160	7.7	26.0

09531700 MAIN OUTLET DRAIN EXTENSION NEAR MORELOS DAM, ARIZ.

LOCATION.--Lat 32°43'43", long 114°42'24", in NW¼ sec.36, T.16 S., R.21 E., San Bernardino meridian, Yuma County, at gaging station at gate structure dividing M.O.D.E. 2 and M.O.D.E. 3, and 2 mi (3 km) northeast of Morelos Dam.

PERIOD OF RECORD.--Chemical analyses: August 1969 to September 1973.

CHEMICAL ANALYSES, WATER YEAR OCTOBEP 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT. 19...	0905	309	28	40	240	99	970	8.4	381
NOV. 16...	1100	304	30	20	260	110	1100	11	390
DEC. 14...	0915	300	29	20	260	110	1100	9.1	394
JAN. 18...	0945	293	30	30	220	86	850	9.7	392
FEB. 14...	0930	302	30	9	240	100	1100	8.5	387
MAR. 21...	1025	302	29	9	250	110	1100	9.6	382
APR. 19...	0935	290	29	9	250	100	1000	9.3	379
MAY 18...	0820	312	27	9	210	99	920	9.0	351
JUNE 20...	0945	317	28	20	220	95	870	8.4	358
JULY 26...	0945	166	23	30	160	81	750	9.9	273
AUG. 23...	0900	333	17	40	140	38	470	8.6	207
SEP. 19...	1015	290	29	10	230	100	1000	9.8	376

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS_ SOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT. 19...	0	920	1400	3.0	--	--	2.5	1900	4260
NOV. 16...	0	990	1500	4.0	11	.0	2.4	1900	4300
DEC. 14...	0	1000	1500	2.4	11	.0	2.4	2000	4460
JAN. 18...	0	980	1000	2.5	13	.1	2.9	1600	3780
FEB. 14...	0	1000	1400	2.7	12	.1	2.7	2000	4150
MAR. 21...	0	1000	1500	3.0	11	.0	2.4	4600	4310
APR. 19...	0	1000	1400	2.3	9.7	.0	2.2	2600	4250
MAY 18...	0	940	1200	2.2	8.3	.0	1.9	1800	3900
JUNE 20...	0	930	1200	2.8	10	.0	2.3	1600	3690
JULY 26...	0	820	990	2.1	6.5	.1	1.5	1500	3280
AUG. 23...	0	480	670	1.3	4.6	.2	1.1	830	2070
SEP. 19...	0	930	1300	2.4	9.2	.1	2.1	1800	3730

09531700 MAIN OUTLET DRAIN EXTENSION NEAR MORELOS DAM, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 19...	3870	5.79	1000	690	13	5940	7.7	22.0
NOV. 16...	4220	5.85	1100	780	14	6530	7.8	20.0
DEC. 14...	4230	6.07	1100	780	14	6360	7.8	16.0
JAN. 18...	3400	5.14	900	580	12	5080	8.0	18.5
FEB. 14...	4100	5.64	1000	690	15	6150	8.0	18.0
MAR. 21...	4220	5.86	1100	760	15	6470	7.7	18.0
APR. 19...	4000	5.78	1000	730	14	6320	7.7	19.5
MAY 18...	3600	5.30	930	640	13	5880	7.3	25.5
JUNE 20...	3550	5.02	940	650	12	5360	7.1	20.0
JULY 26...	2980	4.46	730	510	12	4280	7.3	27.5
AUG. 23...	1930	2.82	510	340	9.1	3010	8.1	2.0
SEP. 19...	3800	5.07	990	680	14	6040	7.8	22.5

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT. 19...	0905	309	6000	7.9	22.0	18.0	7.8
NOV. 16...	1000	304	6000	8.1	20.0	21.0	8.2
20...	0900	302	--	8.0	19.0	11.5	--
DEC. 14...	0915	300	6100	7.7	16.0	8.0	9.6
JAN. 18...	0945	293	5100	7.9	18.5	8.0	9.0
FEB. 14...	0930	302	6100	7.8	18.0	12.5	9.0
MAR. 21...	1025	302	6100	7.9	18.0	17.0	9.8
APR. 19...	0935	290	6000	7.8	19.5	22.0	9.1
MAY 16...	0930	300	5900	8.1	25.0	36.0	9.0
JUNE 20...	0945	317	5600	7.8	24.0	36.0	8.7
JULY 26...	0945	166	4800	8.0	27.0	33.5	9.1
AUG. 23...	0900	333	3000	8.1	27.5	35.0	7.9
SEP. 19...	1015	290	5600	7.9	22.5	30.0	8.7

09531700 MAIN OUTLET DRAIN EXTENSION NEAR MORELOS DAM, ARIZ.--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	ALDRIN (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DIELDRIN (UG/L)	ENDRIN (UG/L)	HEPTACHLOR (UG/L)	HEPTACHLOR EPOXIDE (UG/L)	LINDANE (UG/L)
OCT. 19...	0850	309	.00	.00	.00	.00	.00	.00	.00	.00	.00
NOV. 20...	0900	--	.00	.00	.00	.00	.00	.00	.00	.00	.00
DEC. 14...	0915	300	.00	.00	.00	.00	.00	.00	.00	.00	.00
JAN. 18...	0945	293	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB. 14...	0930	302	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAR. 21...	1025	302	.00	.00	.00	.00	.00	.00	.00	.00	.00
APR. 19...	0935	105	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY 16...	0920	300	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUNE 20...	0945	--	.00	.00	.00	.00	.00	.00	.00	.00	.00
JULY 26...	0945	166	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG. 23...	0900	333	.00	.00	.00	.00	.01	.00	.00	.00	.00

DATE	CHLORDANE (UG/L)	DIAZINON (UG/L)	MALATHION (UG/L)	METHYL PARATHION (UG/L)	PARATHION (UG/L)	PCB (UG/L)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)	TOXAPHENE (UG/L)
OCT. 19...	.0	--	--	--	--	.0	.00	.00	.00	--
NOV. 20...	.0	--	--	--	--	.0	.00	.00	.00	--
DEC. 14...	.0	--	--	--	--	.0	.00	.00	.00	.0
JAN. 18...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
FEB. 14...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
MAR. 21...	.0	.00	.00	.00	.00	.0	.02	.00	.00	.0
APR. 19...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
MAY 16...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
JUNE 20...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
JULY 26...	.0	.00	.00	.00	.00	.0	.11	.00	.00	.0
AUG. 23...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.4

09534000 MAIN DRAIN AT SAN LUIS, ARIZ.

LOCATION.--Lat 32°29'17", long 114°47'16", in SE¼NE¼ sec.11, T.11 S., R.25 W., Yuma County, at gaging station at pumping plant, 0.1 mi (0.2 km) upstream from international boundary, and 0.4 mi (0.6 km) west of San Luis.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--Unpublished chemical analyses (continuing record) from October 1961 to September 1968 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
03...	0930	166	23	20	150	53	340	5.3	282
NOV.									
06...	0935	165	23	20	150	51	320	5.7	279
27...	--	150	18	--	159	57	340	7.0	298
DEC.									
04...	1015	162	23	9	150	49	310	6.2	278
18...	--	140	19	--	146	58	340	8.4	288
JAN.									
02...	0955	75	23	20	150	51	340	6.0	294
15...	1025	140	19	--	150	55	330	8.0	278
FEB.									
05...	0920	166	25	9	150	51	340	6.4	279
26...	1100	135	19	--	167	45	340	7.6	282
MAR.									
05...	0905	135	22	30	140	50	340	6.3	283
26...	0915	142	19	--	147	53	335	8.4	274
APR.									
03...	1040	138	23	9	150	53	350	5.9	282
16...	0930	165	17	--	135	54	305	7.3	262
MAY									
01...	0855	140	20	9	150	52	300	6.0	268
JUNE									
04...	0925	160	21	30	150	53	350	6.0	272
18...	0845	160	17	--	130	62	335	8.1	282
JULY									
02...	0910	140	24	0	160	54	330	5.9	292
17...	1010	160	18	--	131	65	315	7.9	278
AUG.									
06...	0925	160	23	10	150	53	320	5.5	284
20...	0915	155	18	--	145	51	305	8.2	266
SEP.									
04...	0920	155	22	10	140	50	330	6.3	271
17...	0910	160	16	--	149	55	335	7.1	292

09534000 MAIN DRAIN AT SAN LUIS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
03...	0	510	420	.6	--	--	.54	440	1660
NOV.									
06...	0	520	400	.5	2.8	.0	.66	420	1610
27...	0	550	385	--	--	--	--	--	1730
DEC.									
04...	0	500	390	.6	3.4	.1	.80	410	1620
18...	0	520	405	--	--	--	--	--	1650
JAN.									
02...	0	500	410	.5	3.3	.0	.77	420	--
15...	0	510	410	--	--	--	--	--	1690
FEB.									
05...	0	520	410	.5	4.1	.2	.98	440	1730
26...	0	530	410	--	--	--	--	--	1700
MAR.									
05...	0	510	400	.6	3.4	.1	.82	420	1660
26...	0	510	400	--	--	--	--	--	1650
APR.									
03...	0	560	420	.6	3.1	.0	.72	400	1730
16...	0	490	360	--	--	--	--	--	1550
MAY									
01...	0	530	380	.6	3.1	.1	.74	400	1620
JUNE									
04...	0	540	380	.6	1.7	.0	.40	360	1680
18...	0	510	390	--	--	--	--	--	1660
JULY									
02...	0	550	410	.6	2.8	.0	.63	430	1710
17...	0	520	365	.7	--	--	--	--	1670
AUG.									
06...	0	570	370	.5	3.2	.0	.73	370	1670
20...	0	500	355	.6	--	--	--	--	1610
SEP.									
04...	0	550	360	.4	--	--	.72	380	1620
17...	0	530	380	.7	--	--	--	--	1760

09534000 MAIN DRAIN AT SAN LUIS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973--Continued

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
03...	1640	2.26	590	360	6.1	2540	8.0	22.0
NOV.								
06...	1610	2.19	580	360	5.8	2490	7.6	19.0
27...	1660	2.35	630	390	5.9	2590	8.1	--
DEC.								
04...	1570	2.20	580	350	5.6	2480	7.9	18.0
18...	1640	2.24	605	369	6.0	2580	8.0	--
JAN.								
02...	1630	2.22	580	340	6.1	2570	8.1	14.0
15...	1620	2.30	600	372	5.9	2580	8.1	--
FEB.								
05...	1650	2.35	580	360	6.1	2600	7.8	19.0
26...	1660	2.31	600	369	6.0	2620	8.1	--
MAR.								
05...	1620	2.26	560	320	6.3	2540	8.0	14.0
26...	1610	2.24	585	360	6.0	2540	8.0	--
APR.								
03...	1710	2.35	590	360	6.3	2620	8.2	--
16...	1500	2.11	560	345	5.6	2370	8.0	--
MAY								
01...	1580	2.20	590	370	5.4	2430	8.0	19.5
JUNE								
04...	1640	2.23	590	370	6.3	2460	7.9	24.0
18...	1590	2.26	580	349	6.1	2530	8.1	--
JULY								
02...	1680	2.33	620	380	5.8	2620	7.9	28.0
17...	1560	2.27	595	367	5.6	2460	7.9	--
AUG.								
06...	1640	2.27	590	360	5.7	2470	7.9	28.0
20...	1520	2.19	570	352	5.5	2400	8.0	--
SEP.								
04...	1600	2.22	560	330	6.1	2400	7.9	25.5
17...	1620	2.39	600	360	6.0	2520	8.0	--

09534000 MAIN DRAIN AT SAN LUIS, ARIZ.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
OCT.									
18...	0830	--	--	--	--	--	--	500	--
19...	1115	160	2400	7.9	22.0	22.0	7.2	--	--
NOV.									
15...	0900	--	--	--	--	--	--	300	--
16...	1200	140	2490	7.5	20.0	23.0	8.2	--	--
DEC.									
13...	0850	--	--	--	--	--	--	180	--
14...	1100	150	2400	8.0	12.5	12.0	8.8	--	--
JAN.									
17...	0910	--	--	--	--	--	--	140	--
18...	1205	E140	2650	7.9	17.0	20.5	8.1	--	--
FEB.									
13...	1100	--	--	--	--	--	--	200	--
14...	1115	135	2600	7.8	17.5	16.5	8.3	--	--
MAR.									
20...	0915	--	--	--	--	--	--	130	140
21...	1140	75	2600	7.9	17.5	17.5	8.4	--	--
APR.									
18...	1030	--	--	--	--	--	--	140	--
19...	1135	105	2600	7.9	21.0	24.0	8.1	--	--
MAY									
15...	0835	--	--	--	--	--	--	120	170
16...	1000	156	2600	8.0	25.0	34.0	8.2	--	--
JUNE									
19...	1000	--	--	--	--	--	--	190	--
20...	1120	135	2600	7.9	26.0	38.0	7.6	--	--
JULY									
25...	1350	--	--	--	--	--	--	480	--
26...	1245	158	2400	7.9	28.5	41.0	7.6	--	--
AUG.									
22...	0845	--	--	--	27.0	--	--	700	--
23...	1045	135	2540	8.1	27.0	34.0	6.8	--	--
SEP.									
18...	1115	--	--	--	--	--	--	670	--
19...	1140	140	2500	7.8	24.0	34.0	7.0	--	--

09534000 MAIN DRAIN AT SAN LUIS, ARIZ.--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	ALDRIN (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DIELDRIN (UG/L)	ENDRIN (UG/L)	HEPTACHLOR (UG/L)	HEPTACHLOR EPOXIDE (UG/L)	LINDANE (UG/L)
OCT. 19...	1115	160	.00	.00	.00	.00	.00	.00	.00	.00	.00
NOV. 16...	1200	140	.00	.00	.01	.00	.00	.00	.00	.00	.00
DEC. 14...	1100	150	.00	.00	.00	.00	.00	.00	.00	.00	.00
JAN. 18...	1205	140	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB. 14...	1115	135	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAR. 21...	1140	75	.00	.00	.00	.00	.00	.00	.00	.00	.00
APR. 19...	1135	105	.00	.00	.00	.00	.01	.00	.00	.00	.00
MAY 16...	1000	156	.00	.00	.01	.00	.00	.00	.00	.00	.00
JUNE 20...	1120	135	.00	.00	.01	.00	.00	.00	.00	.00	.00
JULY 26...	1245	158	.00	.00	.01	.00	.00	.00	.00	.00	.00
AUG. 23...	1045	135	.00	.00	.01	.01	.01	.00	.00	.00	.00

DATE	CHLORDANE (UG/L)	DIAZINON (UG/L)	MALATHION (UG/L)	METHYL PARATHION (UG/L)	PARATHION (UG/L)	PCB (UG/L)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)	TOXAPHENE (UG/L)
OCT. 19...	.0	--	--	--	--	.0	.00	.00	.00	--
NOV. 16...	.0	--	--	--	--	.0	.00	.00	.00	--
DEC. 14...	.0	--	--	--	--	.0	.00	.00	.00	.0
JAN. 18...	.0	.00	.00	.00	.00	.0	.12	.00	.00	.0
FEB. 14...	.0	.00	.00	.00	.00	.0	.22	.00	.00	.0
MAR. 21...	.0	.00	.00	.00	.00	.0	.04	.00	.00	.0
APR. 19...	.0	.00	.00	.00	.00	.0	.05	.00	.00	.0
MAY 16...	.0	.02	.00	.00	.00	.0	.04	.00	.00	.0
JUNE 20...	.0	.00	.00	.00	.00	.0	.04	.00	.00	.0
JULY 26...	.0	.00	.00	.00	.00	.0	.00	.00	.00	.0
AUG. 23...	.0	.00	.00	.00	.00	.0	.05	.00	.00	.0

09534300 WEST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ.

LOCATION.--Lat 32°29'29", long 114°47'39", in SE¼NE¼ sec.11, T.11 S., R.25 W., Yuma County, at gaging station, 150 ft (50 m) upstream from outlet into Main Drain, 300 ft (100 m) north of international boundary, 0.2 mi (0.3 km) west of San Luis, Ariz., and 19 mi (30 km) south of Yuma.

PERIOD OF RECORD.--Chemical analyses: March 1971 to September 1973.

REMARKS.--No flow Dec. 18, Jan. 26, Apr. 17, July 2, Aug. 1.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
02...	0915	17	8.5	10	84	35	150	4.9	149
NOV.									
06...	0940	30	9.6	20	93	33	160	5.2	171
27...	--	1.2	4.0	--	87	38	165	6.3	162
DEC.									
04...	0950	33	10	9	99	35	180	5.5	190
20...	--	5.6	5.0	--	90	35	155	6.8	164
JAN.									
02...	1000	29	9.6	9	93	34	160	5.4	179
15...	1025	2.2	4.0	--	92	34	150	6.6	160
FEB.									
05...	0850	37	9.3	20	93	32	150	5.3	174
26...	1040	19	4.0	--	90	34	150	6.3	164
MAR.									
05...	0900	27	9.0	9	90	32	150	5.6	183
28...	1020	21	5.0	--	81	32	120	6.6	168
APR.									
02...	0920	45	9.4	0	88	30	120	5.1	165
16...	0915	40	7.0	--	94	31	135	6.7	176
MAY									
01...	0850	34	9.5	9	97	34	160	5.3	188
JUNE									
04...	0920	35	8.5	9	96	33	150	5.2	176
18...	0845	8.6	6.0	--	90	33	140	6.5	162
JULY									
06...	0805	12	9.7	9	90	32	130	5.2	168
18...	0800	2.0	6.0	--	84	34	135	6.9	148
AUG.									
06...	0900	26	10	10	86	32	130	4.8	156
27...	0840	15	8.0	--	86	34	145	6.3	152
SEP.									
04...	0900	13	9.5	70	84	32	150	5.1	160
17...	0900	2.3	7.0	--	84	34	130	6.7	152

09534300 WEST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
02...	0	350	130	.5	--	--	.01	240	--
NOV.									
06...	0	360	140	.5	.50	.0	.12	210	884
27...	0	390	148	--	--	--	--	--	914
DEC.									
04...	0	400	160	.5	1.0	.0	.22	230	1000
20...	0	365	138	--	--	--	--	--	870
JAN.									
02...	4	360	150	.4	1.1	.0	.25	210	910
15...	0	365	132	--	--	--	--	--	886
FEB.									
05...	0	350	130	.5	1.2	.0	.26	210	876
26...	0	365	132	--	--	--	--	--	870
MAR.									
05...	0	360	140	.7	1.1	.0	.25	210	822
28...	0	315	95	--	--	--	--	--	718
APR.									
02...	0	320	110	.5	1.5	.0	.34	110	784
16...	0	335	122	--	--	--	--	--	812
MAY									
01...	0	380	150	.4	1.1	.0	.24	210	926
JUNE									
04...	0	360	130	.5	.30	.0	.06	160	882
18...	0	355	120	--	--	--	--	--	826
JULY									
06...	0	350	120	.5	.70	.0	.16	200	860
18...	0	350	120	.6	--	--	--	--	798
AUG.									
06...	0	360	120	.4	.20	.0	.04	140	802
27...	0	355	134	.6	--	--	--	--	850
SEP.									
04...	0	330	130	1.0	--	--	.03	180	834
17...	0	340	115	.3	--	--	--	--	770

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
02...	836	1.14	350	230	3.5	1330	8.3	22.0
NOV.								
06...	887	1.20	370	230	3.6	1390	7.9	15.0
27...	918	1.24	375	240	3.7	1430	8.2	--
DEC.								
04...	986	1.36	390	240	4.0	1520	8.1	14.0
20...	877	1.18	370	236	3.5	1380	8.1	--
JAN.								
02...	907	1.24	370	220	3.6	1410	8.4	8.0
15...	862	1.20	370	240	3.3	1360	8.2	--
FEB.								
05...	858	1.19	360	220	3.4	1340	8.2	12.0
26...	863	1.18	365	230	3.4	1350	8.3	--
MAR.								
05...	880	1.12	360	210	3.5	1330	8.2	11.0
28...	739	.98	335	197	2.9	1150	8.3	--
APR.								
02...	767	1.07	340	210	2.8	1170	8.1	13.5
16...	819	1.10	360	216	3.1	1280	8.3	--
MAY								
01...	931	1.26	380	230	3.6	1420	8.2	18.5
JUNE								
04...	871	1.20	380	230	3.4	1330	8.2	25.0
18...	832	1.12	360	227	3.2	1290	8.3	--
JULY								
06...	821	1.17	360	220	3.0	1270	8.0	27.0
18...	810	1.09	350	228	3.1	1280	8.1	--
AUG.								
06...	820	1.09	350	220	3.0	1240	8.2	29.5
27...	845	1.16	355	230	3.4	1330	8.2	24.5
SEP.								
04...	821	1.13	340	210	3.5	1270	8.3	26.0
17...	793	1.05	350	226	3.0	1230	8.2	--

09534500 EAST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ.

LOCATION.--Lat 32°29'13", long 114°47'01", in NW¼SW¼ sec.12, T.11 S., R.25 W., Yuma County, at gaging station, 0.2 mi (0.3 km) east of Main Drain pumping plant, and 0.2 mi (0.3 km) west of San Luis.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973.

REMARKS.--No flow Oct. 3, 24-28, Nov. 25, 26, Dec. 7, 27, Jan. 23, Feb. 23, Mar. 14, 21, Apr. 15, June 20, 21, Sept. 5. Unpublished miscellaneous chemical analyses for water years 1962-65, and continuing-record analyses for water years 1966-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT.									
04...	0820	6.5	11	70	100	37	170	5.2	184
NOV.									
06...	0925	6.5	11	20	95	36	200	5.7	177
27...	--	1.6	3.0	--	86	40	200	6.0	106
DEC.									
04...	1000	21	11	9	96	36	180	5.6	184
18...	--	9.4	9.0	--	103	40	210	7.3	188
JAN.									
02...	0940	5.8	8.9	9	100	38	190	5.6	185
15...	1025	.70	6.0	--	106	39	185	7.1	178
FEB.									
05...	0910	5.4	7.6	20	96	35	170	5.6	174
26...	1050	6.5	4.0	--	106	44	195	7.4	152
MAR.									
05...	0920	1.8	7.1	20	94	35	160	5.8	182
26...	0930	17	8.0	--	90	33	140	7.0	164
APR.									
02...	0940	15	9.4	9	99	34	140	5.3	169
23...	0940	2.2	6.0	--	95	35	140	6.7	172
MAY									
01...	0900	12	8.7	20	100	37	180	5.5	187
JUNE									
04...	0940	14	6.9	30	86	36	180	5.4	129
18...	0850	27	6.0	--	92	32	135	6.5	162
JULY									
02...	0900	2.0	9.4	9	90	36	160	5.5	154
17...	1000	21	7.0	--	88	37	160	7.0	136
AUG.									
06...	0910	7.1	10	10	82	34	160	4.6	132
20...	0925	26	8.0	--	82	33	125	7.4	148
SEP.									
04...	0910	3.8	11	10	82	36	170	5.2	127
17...	0915	22	8.0	--	89	37	170	6.7	146

09534500 EAST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
04...	0	370	170	.5	--	--	.09	270	982
NOV.									
06...	0	410	210	.6	1.3	.0	.31	300	1090
27...	0	420	212	--	--	--	--	--	1030
DEC.									
04...	0	380	170	.6	.90	.0	.21	240	1010
18...	0	420	215	--	--	--	--	--	1110
JAN.									
02...	0	380	210	.5	1.0	.0	.22	230	1040
15...	0	390	198	--	--	--	--	--	1040
FEB.									
05...	0	360	170	.5	.50	.0	.11	230	946
26...	0	395	240	--	--	--	--	--	1090
MAR.									
05...	0	370	160	.9	1.2	.0	.26	210	916
26...	0	330	138	--	--	--	--	--	812
APR.									
02...	0	330	160	.5	1.2	.0	.29	120	886
23...	0	350	132	--	--	--	--	--	854
MAY									
01...	0	390	180	.6	.90	.0	.20	240	1020
JUNE									
04...	0	400	190	.6	.00	.0	.00	170	976
18...	0	350	115	--	--	--	--	--	824
JULY									
02...	0	370	160	.6	.00	.0	.01	230	918
17...	0	370	160	.6	--	--	--	--	892
AUG.									
06...	0	380	160	.4	.00	.0	.00	190	866
20...	0	330	111	.5	--	--	--	--	786
SEP.									
04...	0	390	170	.4	--	--	.02	210	924
17...	0	370	172	.6	--	--	--	--	934

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
04...	955	1.34	400	250	3.7	1490	7.8	21.5
NOV.								
06...	1060	1.48	390	240	4.4	1680	7.5	14.5
27...	1020	1.40	380	290	4.5	1640	8.1	--
DEC.								
04...	972	1.37	390	240	4.0	1510	8.1	14.0
18...	1100	1.51	420	266	4.4	1730	8.1	--
JAN.								
02...	1030	1.41	410	250	4.1	1620	8.2	5.5
15...	1020	1.41	425	279	3.9	1620	8.1	--
FEB.								
05...	932	1.29	380	240	3.8	1490	8.0	12.0
26...	1070	1.48	445	320	4.0	1730	8.1	--
MAR.								
05...	925	1.25	380	230	3.6	1450	8.1	9.0
26...	827	1.10	360	230	3.2	1310	8.2	--
APR.								
02...	864	1.20	390	250	3.1	1350	8.2	13.0
23...	851	1.16	380	239	3.1	1340	8.0	--
MAY								
01...	996	1.39	400	250	3.9	1540	8.2	18.0
JUNE								
04...	969	1.33	360	260	4.1	1520	8.2	24.0
18...	818	1.12	360	227	3.1	1280	8.2	--
JULY								
02...	908	1.25	370	250	3.6	1430	7.9	27.0
17...	898	1.21	370	258	3.6	1420	7.9	--
AUG.								
06...	896	1.18	340	240	3.8	1370	8.2	28.0
20...	771	1.07	340	218	2.9	1220	8.0	--
SEP.								
04...	928	1.26	350	250	3.9	1430	8.0	24.5
17...	926	1.27	375	256	3.8	1470	8.1	--

GILA RIVER BASIN

09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, ARIZ. (LAT 33°13'36", LONG 112°46'17")
(Pesticide station)

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	ALDRIN (UG/L)	ALDRIN IN BOTTOM DEPOSITS (UG/KG)	DDD (UG/L)	DDD IN BOTTOM DEPOSITS (UG/KG)	DDE (UG/L)	DDE IN BOTTOM DEPOSITS (UG/KG)	DDT (UG/L)	DDT IN BOTTOM DEPOSITS (UG/KG)	DIELDRIN (UG/L)
DEC. 04...	1500	3.5	.00	--	.00	--	.01	--	.00	--	.01
MAR. 02...	1000	150	.00	.0	.00	3.2	.04	23	.00	4.4	.01
JUNE 21...	1130	15	.00	--	.02	--	.24	--	.05	--	.01

DATE	DIELDRIN IN BOTTOM DEPOSITS (UG/KG)	ENDRIN (UG/L)	ENDRIN IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM DEPOSITS (UG/KG)	LINDANE (UG/L)	LINDANE IN BOTTOM DEPOSITS (UG/KG)	CHLORDANE (UG/L)
DEC. 04...	--	.00	--	.00	--	.00	--	.03	--	.0
MAR. 02...	.0	.00	.0	.00	.0	.00	.0	--	.0	.0
JUNE 21...	--	.00	--	.00	--	.00	--	.00	--	.0

DATE	CHLORDANE IN BOTTOM DEPOSITS (UG/KG)	DIAZINON (UG/L)	MALATHION (UG/L)	METHYL PARATHION (UG/L)	PARATHION (UG/L)	PCB (UG/L)	PCB IN BOTTOM DEPOSITS (UG/KG)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)
DEC. 04...	--	.11	.00	.00	.00	.0	--	.21	.00	.00
MAR. 02...	0	.04	.00	.00	.00	.0	0	.00	.00	.00
JUNE 21...	--	.02	.00	.00	.00	.0	--	.00	.00	.00

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09529000 NORTH GILA DRAIN NO. 1 NEAR YUMA, ARIZ. (LAT 32°45'29", LONG 114°31'20")

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)
OCT., 1972 26...	1140	4.4	21	10	120	44	260	4.9	251
JAN., 1973 03...	0900	10	20	9	100	41	260	4.6	242
APR. 03...	1110	--	15	9	100	38	190	4.7	212
JULY 05...	0945	--	24	10	120	44	250	5.1	274

DATE	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT., 1972 26...	0	480	250	.8	--	--	.26	300	1480
JAN., 1973 03...	0	440	240	.6	1.5	.0	.34	280	1450
APR. 03...	0	380	180	.6	1.6	.0	.36	260	1070
JULY 05...	0	500	240	.7	1.2	.0	.32	330	1480

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT., 1972 26...	1310	2.01	480	270	5.2	1990	8.0	18.0
JAN., 1973 03...	1230	1.97	420	220	5.5	1880	8.0	10.5
APR. 03...	1020	1.46	410	230	4.1	1560	8.0	19.0
JULY 05...	1320	2.01	480	260	5.0	2020	7.8	27.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09529050 NORTH GILA DRAIN NO. 3 NEAR YUMA, ARIZ. (LAT 32°44'28", LONG 114°26'39")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT., 1972									
26...	1230	--	20	10	110	39	180	5.7	197
JAN., 1973									
03...	0920	.30	20	9	100	39	180	5.1	215
APR.									
03...	1055	--	18	9	100	35	180	4.8	210
JULY									
05...	1005	--	21	9	92	33	180	5.6	213

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT., 1972									
26...	0	410	190	.7	--	--	.11	270	1100
JAN., 1973									
03...	0	370	180	.6	.80	.0	.17	250	1100
APR.									
03...	0	380	170	.5	.00	.0	.01	250	1030
JULY									
05...	0	360	180	.9	.30	.0	.09	260	1050

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT., 1972								
26...	1050	1.50	430	270	3.8	1600	8.3	22.5
JAN., 1973								
03...	1000	1.50	410	230	3.9	1560	8.1	11.5
APR.								
03...	992	1.40	390	220	3.9	1600	8.0	19.0
JULY								
05...	978	1.43	370	190	4.1	1480	7.9	30.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09529200 BRUCE CHURCH DRAIN NEAR YUMA, ARIZ. (LAT 32°43'26", LONG 114°31'07")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT., 1972									
04...	0925	--	28	20	200	73	290	8.1	398
JAN., 1973									
03...	0950	.10	23	9	190	74	310	7.8	395
APR.									
03...	1125	--	25	20	190	71	300	8.2	410
JULY									
05...	1030	--	27	10	180	70	270	8.1	345

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT., 1972									
04...	0	700	280	.9	--	--	.29	410	1880
JAN., 1973									
03...	0	690	290	.7	.80	.0	.18	390	2080
APR.									
03...	0	700	280	.7	.90	.0	.22	400	2050
JULY									
05...	0	710	270	.8	.20	.1	.09	370	1860

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT., 1972								
04...	1780	2.56	800	470	4.5	2580	7.9	19.5
JAN., 1973								
03...	1780	2.83	780	450	4.8	2530	8.0	6.0
APR.								
03...	1780	2.79	770	430	4.7	2660	7.7	16.0
JULY								
05...	1710	2.53	740	450	4.3	2450	7.8	30.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09530500 DRAIN 8-B NEAR YUMA, ARIZ. (LAT 32°44'39", LONG 114°41'45")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT., 1972									
05...	1100	--	22	10	110	40	200	4.2	229
JAN., 1973									
03...	1240	2.1	20	9	100	37	200	4.2	222
APR.									
03...	1010	--	21	20	110	35	200	4.6	225
JULY									
05...	1145	--	23	9	100	35	190	4.5	214

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DIS. SOLVED NITRATE (NO3) (MG/L)	DIS. SOLVED NITRITE (NO2) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT., 1972									
05...	0	450	170	.6	--	--	.03	290	1160
JAN., 1973									
03...	0	420	160	.4	.30	.0	.07	210	1110
APR.									
03...	0	440	170	.5	.40	.0	.11	240	1140
JULY									
05...	0	420	160	.6	.80	.7	.39	240	1140

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SODIUM AD-SORPTION RATIO	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT., 1972								
05...	1110	1.58	440	250	4.2	1720	7.8	24.5
JAN., 1973								
03...	1050	1.51	400	220	4.3	1620	8.1	18.0
APR.								
03...	1090	1.55	420	230	4.3	1710	7.9	18.5
JULY								
05...	1050	1.55	390	220	4.2	1570	7.6	32.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS,
WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09531900 MAIN OUTLET DRAIN EXTENSION BELOW MORELOS DAM, ARIZ. (M.O.D.E. 3)
(LAT 32°42'16", LONG 114°43'32")

CONDUCTIVITY (MICROMHOS AT 25°C), RANDOM (INSTANTANEOUS)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6470	6350	6250	5010	6010	5080	5270	5970	5680	5560	4940	5710
2	6450	6290	6210	5020	6670	5090	5150	5900	5740	5530	5490	5770
3	6280	6290	6210	5030	6620	5100	5140	5920	5770	5580	5840	5770
4	6280	6140	6210	5050	6620	5110	5110	5840	5750	5390	5910	5820
5	6230	6290	6250	5020	6550	5120	5100	5840	5620	5470	5980	5820
6	6130	6230	6280	5040	6570	5030	5130	5870	5650	5420	5830	5830
7	6030	6280	6270	5000	6470	5010	5090	5800	5630	5420	5360	5810
8	6280	6300	6210	5040	6540	5030	5100	5850	5730	5530	5710	6000
9	6300	6300	6260	5060	6470	4920	5100	5880	5570	5470	5740	5920
10	6300	6350	6350	5010	6420	4950	5090	5900	5750	5500	5800	5850
11	6260	6180	6420	5070	6420	5050	5440	5900	5780	5500	5830	5920
12	6240	6170	6440	5060	6440	5010	6410	5810	5740	5610	5880	5750
13	6180	6160	6440	5000	6390	5050	6460	5830	5690	5780	5850	5790
14	---	6170	6520	5070	6330	5120	6680	5850	5760	5820	5850	5750
15	---	6170	6540	5110	6450	5080	6490	5770	5810	5710	5830	5700
16	6270	6460	6520	5100	5040	6290	6390	5860	5740	5770	5630	5670
17	6240	6380	6500	5160	5090	6620	6390	5770	5460	5710	5800	5760
18	6250	6410	6300	5160	5030	6590	6400	5760	5470	5740	5610	5780
19	6190	6530	6350	5160	5050	6540	6400	5830	5570	5690	5800	5850
20	6130	6500	4920	5170	5060	6490	6320	5790	5550	5680	5690	5720
21	6210	6480	4960	5180	5040	6470	6290	5810	5530	5680	3520	5770
22	6120	6540	4910	5130	5010	6500	6310	5750	5510	5590	3790	5770
23	6100	6440	4940	5130	5040	6580	6150	5790	5510	5090	3260	5750
24	6200	6390	4990	5130	5040	6550	6060	5760	5520	5220	2810	5720
25	6130	6360	5010	5100	5060	6470	6380	5810	5510	4720	3170	5710
26	6180	6340	5010	5090	5040	6460	6300	5770	5520	4650	4420	5870
27	6180	6360	5030	5100	5070	6470	5890	5770	5590	4910	5040	5880
28	6180	6390	5010	5140	5100	6470	5910	---	5600	5070	5190	5810
29	6090	6360	4960	5150	---	5100	5950	5780	5600	5170	5460	5800
30	6140	6260	4950	5120	---	4830	5970	5780	5540	5320	5650	5870
31	6150	---	5020	5100	---	5340	---	5810	---	5190	5850	---
MEAN	6210	6330	5810	5090	5810	5660	5860	5830	5630	5440	5240	5800
YEAR	MAX	6680	MIN	2810	MEAN	5720						

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)
LITTLE COLORADO RIVER BASIN														
09383400 LITTLE COLORADO RIVER AT GREER, ARIZ. (LAT 34°01'00", LONG 109°27'28")														
APR., 1973														
18...	1700	103	16	190	8.0	2.8	3.0	1.2	33	0	[illegible]	[illegible]	[illegible]	[illegible]
09383500 NUTRIOSO CREEK ABOVE NELSON RESERVOIR, NEAR SPRINGERVILLE, ARIZ. (LAT 34°01'49", LONG 109°11'09")														
APR., 1973														
18...	1445	144	22	80	21	6.4	8.9	.8	96	0	17	[illegible]	[illegible]	[illegible]
09383550 NUTRIOSO CREEK BELOW NELSON RESERVOIR, NEAR SPRINGERVILLE, ARIZ. (LAT 34°03'36", LONG 109°11'40")														
APR., 1973														
18...	1315	147	23	30	24	7.2	11	1.0	118	0	16	[illegible]	[illegible]	[illegible]
09384000 LITTLE COLORADO RIVER ABOVE LYMAN RESERVOIR, NEAR ST. JOHNS, ARIZ. (LAT 34°19'50", LONG 109°21'10")														
APR., 1973														
18...	1000	577	18	30	21	6.6	14	1.4	107	0	17	[illegible]	[illegible]	[illegible]
09393500 SILVER CREEK NEAR SNOWFLAKE, ARIZ. (LAT 34°40'00", LONG 110°02'30")														
APR., 1973														
24...	1215	70	14	30	25	7.1	6.4	2.3	109	0	11	[illegible]	[illegible]	[illegible]
09398500 CLEAR CREEK BELOW WILLOW CREEK, NEAR WINSLOW, ARIZ. (LAT 34°40'05", LONG 111°00'25")														
OCT., 1972														
17...	1330	--	4.6	90	20	7.9	2.8	1.0	102	0	7.0	[illegible]	[illegible]	--
MAR., 1973														
19...	1740	258	4.0	80	9.0	4.2	1.0	.5	45	0	6.7	[illegible]	[illegible]	[illegible]
APR.														
25...	1500	1910	4.7	120	9.2	4.1	1.0	.6	45	0	5.8	[illegible]	[illegible]	[illegible]
09400595 SCHULTZ CANYON AT FLAGSTAFF, ARIZ. (LAT 35°13'37", LONG 111°39'29")														
APR., 1973														
13...	1500	15	26	130	11	4.2	4.5	[illegible]	52	0	[illegible]	[illegible]	[illegible]	[illegible]
09400600 RIO DE FLAG AT FLAGSTAFF, ARIZ. (LAT 35°15'10", LONG 111°39'20")														
APR., 1973														
13...	1650	94	25	110	10	4.5	3.8	2.4	55	0	[illegible]	[illegible]	[illegible]	[illegible]
09400680 SWITZER CANYON AT FLAGSTAFF, ARIZ. (LAT 35°12'44", LONG 111°38'21")														
APR., 1973														
13...	1800	75	11	40	4.9	1.9	1.6	1.4	29	0	2.5	[illegible]	[illegible]	[illegible]

DATE	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
LITTLE COLORADO RIVER BASIN													
09383400 LITTLE COLORADO RIVER AT GREER, ARIZ. (LAT 34°01'00", LONG 109°27'24")--Continued													
APR., 1973 18...	0.0	0.04	0.12	50	75	60	0.10	52	3	0.2	80	7.5	0.0
09383500 NUTRIOSO CREEK ABOVE NELSON RESERVOIR, NEAR SPRINGERVILLE, ARIZ. (LAT 34°01'49", LONG 109°11'09")--Continued													
APR., 1973 18...	.0	.01	.34	20	152	127	.18	79	0	.4	192	7.8	8.0
09383550 NUTRIOSO CREEK BELOW NELSON RESERVOIR, NEAR SPRINGERVILLE, ARIZ. (LAT 34°03'36", LONG 109°11'40")--Continued													
APR., 1973 18...	.0	.02	.37	50	156	145	.21	90	0	.5	220	7.6	8.0
09384000 LITTLE COLORADO RIVER ABOVE LYMAN RESERVOIR, NEAR ST. JOHNS, ARIZ. (LAT 34°19'50", LONG 109°21'18")--Continued													
APR., 1973 18...	.0	.21	.31	40	158	138	.21	80	0	.7	218	7.8	9.0
[illegible] SILVER CREEK NEAR SNOWFLAKE, ARIZ. [illegible]--Continued													
APR., 1973 24...	.0	.01	.21	40	144	122	.19	87	0	.3	200	7.7	12.5
[illegible] CLEAR CREEK BELOW WILLOW CREEK, NEAR WINSLOW, ARIZ. [illegible]--Continued													
OCT., 1972 17...	--	.04	.05	60	120	100	.16	50	7	.2	187	7.4	[illegible]
MAR., 1973 19...	.0	.00	.06	0	72	60	.10	60	5	.1	82	7.7	--
APR. 25...	.0	.01	.21	50	65	60	.09	60	5	.1	88	7.6	--
[illegible] CANYON AT FLAGSTAFF, ARIZ. [illegible]--Continued													
APR., 1973 25...	.0	.23	.56	20	107	88	.15	65	1	.5	[illegible]	7.2	7.0
[illegible] RIO DE FLAG AT FLAGSTAFF, ARIZ. [illegible]--Continued													
APR., 1973 25...	.0	.17	.86	30	156	80	.14	65	0	.3	208	7.2	8.5
[illegible] SWITZER CANYON AT FLAGSTAFF, ARIZ. [illegible]--Continued													
APR., 1973 25...	.0	.08	.32	20	52	40	.07	20	0	.2	50	7.0	8.5

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)

LITTLE COLORADO RIVER BASIN

09401250 MOENKOPI WASH NEAR MOENKOPI, ARIZ.
(LAT 36°06'36", LONG 111°09'19")

DATE	TIME	CFS	SIO2	FE	CA	MG	NA	K	HCO3	CO3	SO4	CL	F	NO3
OCT., 1972														
26...	1630	--	6.3	60	200	32	64	5.4	78	0	650	8.0	0.7	--
JULY, 1973														
20...	1325	--	8.5	60	580	170	650	15	248	0	2700	64	1.2	.70
SEP.														
12...	1030	3.6	8.9	100	250	75	160	9.6	137	0	1100	20	.9	15

09401400 MOENKOPI WASH NEAR TUBA CITY, ARIZ.
(LAT 36°01'25", LONG 111°25'48")

DATE	TIME	CFS	SIO2	FE	CA	MG	NA	K	HCO3	CO3	SO4	CL	F	NO3
OCT., 1972														
19...	1215	--	--	20	120	22	160	7.1	115	--	--	--	--	--
26...	1130	--	6.1	80	240	43	180	6.5	79	0	950	22	.7	--

HAVASU CREEK BASIN

09403933 WEST CATARACT CREEK NEAR WILLIAMS, ARIZ.
(LAT 35°14'52", LONG 112°13'28")

DATE	TIME	CFS	SIO2	FE	CA	MG	NA	K	HCO3	CO3	SO4	CL	F	NO3
MAR., 1973														
26...	1315	5.5	19	40	11	4.0	2.9	2.2	58	0	5.8	2.2	.1	1.1

09404100 CATARACT CREEK NEAR GRAND CANYON, ARIZ.
(LAT 35°43'28", LONG 112°26'55")

DATE	TIME	CFS	SIO2	FE	CA	MG	NA	K	HCO3	CO3	SO4	CL	F	NO3
APR., 1973														
06...	1520	17	15	130	16	3.5	5.6	2.5	75	0	6.6	3.7	.0	.80

BILL WILLIAMS RIVER BASIN

[illegible] KIRKLAND CREEK NEAR KIRKLAND, ARIZ.
(LAT 34°23'30", LONG 112°43'15")

DATE	TIME	CFS	SIO2	FE	CA	MG	NA	K	HCO3	CO3	SO4	CL	F	NO3
APR., 1973														
17...	1600	4.9	45	5	42	17	22	5.5	231	0	31	28	.2	1.4

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED ARSENIC (AS) (UG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	HEXAVALENT CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)
APR., 1973								
17...	1600	4.9	2	40	0	0	2	17

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
LITTLE COLORADO RIVER BASIN													
09401250 MOENKOPI WASH NEAR MOENKOPI, ARIZ. (LAT 36°06'30", LONG 111°09'19")--Continued													
OCT., 1972													
26...	--	1.7	0.05	70	1090	1010	1.48	630	570	1.1	1551	7.6	12.0
JULY, 1973													
20...	.2	.26	.06	660	4300	4090	5.85	1600	1400	6.0	6060	7.7	32.0
SEP.													
12...	.2	5.6	.21	60	1910	1710	2.60	930	810	2.3	2150	7.4	19.5
09401400 MOENKOPI WASH NEAR TUBA CITY, ARIZ. (LAT 36°01'25", LONG 111°23'40")--Continued													
OCT., 1972													
19...	--	--	--	--	--	--	--	530	500	3.5	1660	7.6	--
26...	--	3.0	.03	90	1470	1460	2.00	760	710	2.2	1870	7.7	18.0
HAVASU CREEK BASIN													
09403930 WEST CATARACT CREEK NEAR WILLIAMS, ARIZ. (LAT 35°14'12", LONG 112°13'20")--Continued													
MAR., 1973													
28...	.0	.26	.12	0	106	77	.14	66	0	.2	105	7.5	.5
09404100 CATARACT CREEK NEAR GRAND CANYON, ARIZ. (LAT 35°45'20", LONG 112°26'33")--Continued													
APR., 1973													
06...	.0	.09	.12	50	108	81	.15	58	0	.2	109	7.5	15.0
BILL WILLIAMS RIVER BASIN													
09424470 KIRKLAND CREEK NEAR KIRKLAND, ARIZ. (LAT 34°23'50", LONG 112°43'19")--Continued													
APR., 1973													
17...	.0	.18	.38	40	355	325	.48	250	19	.6	507	8.1	21.0

DATE	CYANIDE (CN) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SIL-VER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
APR., 1973								
17...	0.00	0	2	0	<.5	2	0	20

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)
						BILL WILLIAMS RIVER BASIN								
						342634112415000 SKULL VALLEY WASH (LAT 34°26'34", LONG 112°41'50")								
APR., 1973 17...	1330	0.10	26	9	140	62	120	4.0	405	0	350	120	1.3	20
						34270112420300 SKULL VALLEY WASH NEAR SKULL VALLEY, ARIZ. (LAT 34°27'10", LONG 112°42'03")								
JUNE, 1973 28...	1600	.20	36	0	72	25	59	2.8	269	0	110	58	1.2	1.8

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED ARSENIC (AS) (UG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	HEXAVALENT CHROMIUM (CR6) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)
JUNE, 1973 28...	1600	.20	1	60	1	0	0	11

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)
						GILA RIVER BASIN								
						09504500 OAK CREEK NEAR CORNVILLE, ARIZ. (LAT 34°45'50", LONG 111°53'20")								
APR., 1973 19...	1800	764	12	40	14	5.2	2.2	0.8	68	0	3.6	1.3	0.1	0.10
						09505200 WET BEAVER CREEK NEAR RIMROCK, ARIZ. (LAT [illegible], LONG [illegible])								
APR., 1973 [illegible]	1100	220	14	30	11	4.7	2.2	1.5	56	0	7.0	2.2	.0	.00
						09505250 RED TANK DRAW NEAR RIMROCK, ARIZ. (LAT [illegible], LONG [illegible])								
APR., 1973 [illegible]	1000	52	16	70	12	4.4	2.2	2.1	57	0	7.0	2.4	.0	.10
						09505300 RATTLESNAKE CANYON NEAR RIMROCK, ARIZ. (LAT [illegible], LONG [illegible])								
APR., 1973 [illegible]	1100	[illegible]	13	70	5.8	2.8	1.8	.3	20	0	5.6	.7	.0	.00

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
BILL WILLIAMS RIVER BASIN													
342634112415000 SKULL VALLEY WASH (LAT 34°26'34", LONG 112°41'50")--Continued													
APR., 1973													
17...	0.1	4.6	0.12	160	1050	1040	1.43	610	270	2.1	1560	7.8	22.0
342710112420300 SKULL VALLEY WASH NEAR SKULL VALLEY, ARIZ. (LAT 34°27'10", LONG 112°42'03")--Continued													
JUNE, 1973													
28...	.7	.63	.18	60	505	499	.69	280	62	1.5	795	7.8	27.0

DATE	CYANIDE (CN) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED MOLYB-DENUM (MO) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
JUNE, 1973								
28...	0.00	0	0	0	0.1	<0	6	20

DATE	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
GILA RIVER BASIN													
09504500 OAK CREEK NEAR CORNVILLE, ARIZ. (LAT 34°45'36", LONG 111°53'24")--Continued													
APR., 1973													
10...	0.0	0.02	0.12	10	83	71	0.11	56	4	0.1	132	7.5	10.0
09505200 WET BEAVER CREEK NEAR RIMROCK, ARIZ. [illegible]--Continued													
APR., 1973													
03...	.0	.00	.15	40	72	71	.10	67	1	.1	88	7.7	6.0
[illegible] RED TANK DRAW NEAR RIMROCK, ARIZ. [illegible]--Continued													
APR., 1973													
03...	.0	.03	.11	40	66	72	.09	68	1	.1	103	7.6	8.0
[illegible] RATTLESNAKE CANYON NEAR RIMROCK, ARIZ. [illegible]--Continued													
APR., 1973													
03...	.0	.09	.06	0	67	65	.08	36	1	.2	58	7.6	0.0

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA,
WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)
GILA RIVER BASIN														
09505350 DRY BEAVER CREEK NEAR RIMROCK, ARIZ. (LAT 34°43'43", LONG 111°46'30")														
MAR., 1973														
02...	1430	139	13	50	7.1	3.1	1.9	0.7	39	0	6.1	1.8	0.1	0.00
APR.														
26...	1500	543	11	100	4.8	2.2	1.3	.5	26	0	3.7	1.5	.0	.00
09505800 WEST CLEAR CREEK NEAR CAMP VERDE, ARIZ. (LAT 34°32'19", LONG 111°41'36")														
OCT., 1972														
07...	1815	--	14	100	14	5.6	1.5	1.9	63	0	9.3	1.9	.1	--
APR., 1973														
11...	1215	1300	10	90	9.3	3.8	1.5	.8	45	0	4.0	.9	.1	.10
09519800 GILA RIVER BELOW PAINTED ROCK DAM, ARIZ. (LAT 33°04'30", LONG 113°00'50")														
APR., 1973														
04...	1000	--	16	--	50	14	95	7.2	166	0	75	152	.8	--
09...	1420	--	15	--	54	19	130	8.3	168	0	92	190	.8	--
16...	0900	--	16	9	52	15	110	6.1	167	0	66	180	.8	1.4
23...	0800	--	14	9	51	16	120	6.3	171	0	66	180	.8	.60
30...	0830	--	14	20	51	16	120	5.5	165	0	63	180	.5	.50
MAY														
14...	1200	--	15	20	51	16	120	5.8	172	0	63	170	.8	.20
29...	0830	--	15	9	52	16	120	5.6	167	0	64	170	.6	.50
JUNE														
18...	0745	--	15	30	53	16	120	5.5	183	0	56	170	.5	.00
JULY														
02...	0830	--	17	10	93	30	210	7.0	209	0	150	300	.7	.90
AUG.														
06...	0800	--	18	20	61	19	130	6.9	218	0	68	200	.5	.00
09520050 GILA RIVER NEAR AGUA CALIENTE, ARIZ. (LAT 32°57'43", LONG 113°18'10")														
APR., 1973														
04...	1030	--	15	--	58	15	95	8.5	175	0	72	156	.5	--
09...	1700	860	12	--	52	18	110	8.5	178	0	82	160	.8	--
16...	1335	888	11	0	56	16	120	6.1	173	0	75	160	.5	.10
23...	1510	1800	11	0	53	15	130	6.7	178	0	66	150	.5	.00
30...	1000	2360	13	0	55	16	130	5.9	172	0	68	190	.5	.60
MAY														
14...	1605	2070	15	0	57	16	130	5.8	172	0	70	180	.2	.90
29...	1015	2040	16	0	53	16	120	5.1	173	0	68	180	.0	.80
JUNE														
18...	1605	2300	11	50	58	16	120	5.3	184	0	56	170	.3	.10

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
GILA RIVER BASIN													
09505350 DRY BEAVER CREEK NEAR RIMROCK, ARIZ. (LAT 34°43'43", LONG 111°46'30")--Continued													
MAR., 1973													
02...	0.0	0.01	0.06	20	78	53	0.11	31	0	0.2	71	7.[illegible]	7.5
APR.													
26...	.0	.01	.09	20	57	38	.08	21	0	.1	49	7.[illegible]	--
09505800 WEST CLEAR CREEK NEAR CAMP VERDE, ARIZ. (LAT 34°32'19", LONG 111°41'36")--Continued													
OCT., 1972													
07...	--	.00	.21	80	110	80	.15	58	6	.1	127	6.[illegible]	17.0
APR., 1973													
11...	.0	.02	.15	20	68	53	.09	39	2	.1	81	7.[illegible]	5.5
09519800 GILA RIVER BELOW PAINTED ROCK DAM, ARIZ. (LAT 33°04'30", LONG 113°00'50")--Continued													
APR., 1973													
08...	--	--	--	--	480	475	.65	188	48	5.1	815	7.[illegible]	--
09...	--	--	--	--	558	591	.76	210	75	5.9	1050	7.[illegible]	--
16...	.1	.36	--	190	516	531	.70	190	55	5.5	958	7.[illegible]	--
23...	.0	.18	--	160	516	539	.70	190	53	5.8	967	7.[illegible]	--
30...	.0	.12	--	160	502	533	.68	190	58	5.8	958	7.[illegible]	--
MAY													
14...	.1	.09	--	170	508	527	.69	190	52	5.8	947	7.[illegible]	--
29...	.2	.14	--	160	516	527	.70	200	59	5.7	958	7.[illegible]	--
JUNE													
18...	.0	.02	--	180	538	527	.73	200	48	5.7	974	7.[illegible]	--
JULY													
02...	.0	.23	--	500	1050	982	1.43	360	180	8.8	1700	7.[illegible]	--
AUG.													
06...	.0	.01	--	240	600	601	.82	250	55	5.7	1000	7.[illegible]	--
09520050 GILA RIVER NEAR AGUA CALIENTE, ARIZ. (LAT 32°57'43", LONG 113°18'16")--Continued													
APR., 1973													
08...	--	--	--	--	872	885	.68	191	55	2.9	849	8.[illegible]	--
09...	--	--	--	--	506	550	.69	202	60	5.4	931	8.[illegible]	--
16...	.0	.02	--	210	550	550	.72	213	64	5.6	965	8.[illegible]	20.0
23...	.0	.06	--	180	548	558	.75	190	51	6.1	986	8.[illegible]	21.0
30...	.1	.13	--	210	562	564	.76	200	62	6.0	1010	7.[illegible]	20.5
MAY													
14...	.2	.20	--	190	540	562	.73	210	67	5.9	989	7.[illegible]	27.0
29...	.0	.21	--	180	548	546	.75	210	56	5.7	975	7.[illegible]	28.0
JUNE													
18...	.0	.02	--	200	536	525	.73	200	52	5.7	970	8.[illegible]	29.0

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

GILA RIVER BASIN

09520360 GILA RIVER NEAR MOHAWK, ARIZ.
(LAT 32°47'20", LONG 113°45'50")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)
APR., 1973														
16...	0945	104	8.1	40	58	17	120	6.9	178	0	76	180	.5	.10
23...	1035	240	12	20	54	16	130	7.5	180	0	92	190	.5	.20
30...	1015	840	12	30	59	17	130	7.2	181	0	73	200	.5	.10
MAY														
14...	1005	1530	14	30	56	16	130	6.2	182	0	69	190	.2	.40
29...	1740	1650	15	9	57	16	120	5.7	182	0	82	190	.6	.10
JUNE														
18...	1150	1320	11	20	55	16	120	5.9	190	0	65	180	.6	.00
JULY														
05...	0925	46	18	80	100	28	210	9.0	271	0	140	350	.6	.20
AUG.														
02...	1005	32	11	10	71	21	170	7.0	228	0	93	260	.6	.10

09520500 GILA RIVER NEAR DOME, ARIZ.
(LAT 32°45'39", LONG 114°25'11")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)
APR., 1973														
23...	1130	2.4	10	9	180	73	400	7.8	214	0	410	720	.5	.00
MAY														
15...	1400	822	13	40	66	19	140	7.6	197	0	95	210	.2	.00
30...	1030	1310	15	30	59	17	140	7.2	196	0	83	200	.5	.10
JUNE														
19...	0930	743	12	40	60	17	140	6.6	198	0	83	200	.6	.00
JULY														
05...	1250	118	16	30	96	30	250	8.8	264	0	160	400	.8	.00
AUG.														
02...	1400	5.5	8.4	20	260	110	690	9.8	257	0	600	1300	1.2	.10

330045110500200 GILA RIVER 3.0 MILES DOWNSTREAM FROM HAYDEN, ARIZ.
(LAT 33°00'45", LONG 110°50'02")

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)
OCT., 1972														
10...	1500	35	28	60	120	24	130	9.6	244	0	500	140	1.2	3.2

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED ARSENIC (AS) (UG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	HEXAVALENT CHROMIUM (CR6) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)
OCT., 1972								
10...	1500	35	2	160	1	0	1	58

GILA RIVER BASIN

09520360 GILA RIVER NEAR MOHAWK, ARIZ.
(LAT 32°47'20", LONG 113°45'50")--Continued

DATE	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
APR., 1973													
16...	0.0	0.02	--	210	570	555	0.78	210	69	3.6	1010	7.9	20.0
23...	.0	.04	--	200	556	591	.76	200	53	4.0	997	7.6	21.5
30...	.0	.03	--	190	594	588	.81	220	69	3.8	1050	7.6	--
MAY													
14...	.2	.16	--	200	602	572	.82	210	56	3.9	1010	8.0	21.5
29...	.0	.03	--	190	562	576	.76	210	59	3.6	1000	7.9	27.0
JUNE													
18...	.0	.01	--	190	556	547	.76	200	47	3.7	994	7.9	26.5
JULY													
05...	.0	.05	--	640	--	990	1.35	370	140	4.8	1760	8.1	31.0
AUG.													
02...	.0	.03	--	410	840	747	1.14	260	77	4.6	1340	8.2	--

09520500 GILA RIVER NEAR DOME, ARIZ.
(LAT 32°45'39", LONG 114°25'11")--Continued

DATE	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
APR., 1973													
23...	.0	.01	--	440	--	1910	2.60	750	570	6.4	3130	7.8	20.0
MAY													
15...	.0	.02	--	250	656	648	.89	240	81	3.9	1140	7.8	25.0
30...	.0	.02	--	220	644	619	.88	220	57	4.1	1090	7.3	27.0
JUNE													
19...	.0	.01	--	310	670	617	.91	220	57	4.1	1100	7.7	25.2
JULY													
05...	.0	.01	--	560	--	1090	1.48	360	150	5.7	1960	7.8	32.0
AUG.													
02...	.0	.03	--	1100	3300	3110	4.49	1100	890	9.0	5010	7.3	31.0

330045110500200 GILA RIVER 3.0 MILES DOWNSTREAM FROM HAYDEN, ARIZ.
(LAT 33°00'45", LONG 110°50'02")--Continued

DATE	DIS-SOLVED NITRITE (NO2) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT., 1972													
10...	.0	.73	.31	160	922	877	1.25	400	200	2.8	1350	7.3	27.0

DATE	CYANIDE (CN) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED MOLYB-DENUM (MO) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT., 1972								
10...	0.00	60	1	0	0.0	19	2	10

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